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## P R E F A C E.

THE publishers having called upon the author for another edition of this work, he has subjected it to an entire revision. It originated in the numerous applications made to him for his opinion, as to the best method of study for one about to enter upon professional life, as well as for one engaged in its prosecution. Some years ago, he received a letter from a young gentleman, requesting such information, and asking the author's permission to promulgate it to the world. This was declined; but the proposition had some influence in producing the present observations on medical education. Parts of them have likewise formed portions of introductory lectures delivered to his class.

The whole of the observations apply to the study of medicine as taught in this country.

The author has entered into few or no speculations as to what medical education ought to be. The work is intended simply as some guide to the American medical student, who, too frequently, is totally uninformed as to the course he ought to pursue—not only when he commences to read professional subjects, but when he enters a medical college for the prosecution of his studies there.

ROBLEY DUNGLISON.

109 *South Tenth Street,* }  
*Philadelphia, September, 1844.* }

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# THE MEDICAL STUDENT.

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## CHAPTER I.

### PRELIMINARY EDUCATION.

THE subject of practical education has occupied the attention of every enlightened nation, and has ever been one of intense interest to the reflecting portion of this country. It has been a universally received axiom, that the foundation of a republic must be in the information of its people, and that, whilst the monarchical governments of other countries may be successfully administered by an oligarchy of intelligence, a government—like that of the United States—cannot be carried on without an extensive diffusion of knowledge among those who have to select its very machinery. The political circumstances of a country will, also, modify most importantly the course of instruction; and that system, which is adopted in the old universities of Oxford, Cambridge, and Dublin, in a nation in which the law of primogeniture exists, where wealth is entailed in families, and where the colleges themselves are richly endowed, may be impracticable, or impolitic, in a country not possessing such incentives. Education must, therefore, be suited to the

country, and a long period must elapse before we can expect to have individuals as deeply instructed as in those universities, although the mass of the community may be more enlightened. We have no benefices, no fellowships with fixed stipends, to offer those who may devote themselves to the profound study of certain subjects. In England and Ireland, it is by no means uncommon for a student to remain at college until he is twenty-two or twenty-three years of age, in the acquisition of his preliminary education, or of those branches that are made to precede a course of professional study—the whole period of his academic residence being consumed in the study of these branches; but, in this country, such a course would be as unadvisable as it is generally impracticable. The equal division of property precludes any extensive accumulation of wealth in families: the youth are compelled to launch early into life: the more useful subjects of study have to be selected, and the remainder are postponed as luxuries, to be acquired, should circumstances admit of indulgence.

In no country are the colleges or higher schools so numerous, in proportion to the population, as in the United States. There are not fewer, perhaps, than eighty-five schools capable of conferring degrees; yet, an erroneous inference would be drawn, were we to affirm, that the education of a nation is always in a direct ratio with the number of its higher schools. Such would be the fact, did these institutions assume an elevated standard in the distribution of their highest honours, and were the condition of the intermediate schools such, that the youth could be sent to the uni-

versity so prepared as to be able to cultivate his studies there to the greatest advantage. Unfortunately, in many parts of the United States, the condition of the intermediate schools and academies has been grievously neglected; so that the authorities of the universities have been compelled to lower their standard, and to admit students totally unprepared for more advanced studies. In this way, many of the higher schools have degenerated into mere gymnasias, or ordinary academies. This circumstance, with the multiplication of institutions capable of conferring degrees, has been attended with the additional evil, that, in some, the highest honours have been, and are, awarded for acquirements, which would scarcely enable their possessors to enter the lowest classes in others.

Every well-devised system of general education should combine an attention to language,—to the sciences that relate to magnitude and numbers,—and to those that embrace the phenomena of mind and of matter.

Little doubt can exist in the minds of the intelligent that the ancient languages should form one element. Much has been said—and will continue to be said—on both sides of this question, into which we do not propose to enter. Admitting, however, that the Latin language, for example, is less necessary now, than when it was the exclusive language of the learned, and that the modern languages have emerged from their then *Patois* condition, and risen in relative importance, a certain knowledge of that tongue, as well as of the Greek, ought still to form part of the education of every gentleman. The minds of youth cannot be bet-

ter engaged, during the early period of their university career, than in becoming acquainted with the classic models of antiquity, and practised in the habits of discrimination, which the study engenders. Whether it should be prosecuted to the extent inculcated at the English universities, and to the comparative exclusion of other subjects, is another question. In this country, at least, the course would be injudicious, and unfeasible. In the very earliest copy of the enactments of the University of Virginia, it was determined, by its illustrious founder, and his able associates, that no diploma should be given, in any of the schools of the university, to any one, who had not passed such an examination in the Latin language as had proved him able to read the highest classics in that language, with ease, thorough understanding, and just quantity. "And if he be also a proficient in Greek," adds the enactment, "let that too be stated in the diploma; the intention being, that the reputation of the university shall not be committed but to those, who, to an eminence in some one or more of the sciences taught in it, add a proficiency in those languages, which constitute the basis of a good education, and are indispensable to fill up the character of 'a well educated man.'"

Without dwelling on the unreasonableness of denying a diploma to one who has a sufficient knowledge of mathematics, or chemistry, or of natural or moral philosophy, because he may not be thoroughly acquainted with Latin, it is surprising, that the regulation should not have struck that learned and philosophic individual as constituting a total prohibition to graduation in certain departments. To be able "to read the

highest classics in the Latin language with ease, thorough understanding, and just quantity," would, of itself, require as much time as the majority of American youths are capable of devoting to their collegiate instruction. Accordingly, the Faculty of Professors early and judiciously suggested a modification of the rule relating to graduation, which was at once adopted by the Board of Visitors. As it now stands, it merely requires, that every candidate for graduation in any of the schools, shall give the Faculty satisfactory proof of his ability to write the English language correctly.

The ancient languages should certainly form one element of general education, and this, we believe, is conceded in most, if not in all the universities of this country, as regards the attainment of a university degree. As little doubt can there be with regard to mathematics, which has, in some institutions, been esteemed the study of primary importance. The utility of a certain acquaintance with numbers, and magnitude, is obvious in every department of life; but the greatest advantage from the study is the precision and accuracy, which it gives to the reasoning powers.

When the student has attained this more elementary instruction, he is capable of undertaking satisfactorily the study of physics, and of becoming acquainted with the bodies that surround him, and the laws that govern them, as well as of entering upon the science of moral philosophy, and of comprehending the interesting subject of his own psychology.

These would seem to be the only departments of knowledge, that need be required for the attainment of a university degree. They comprise an acquaint-

ance with the ancient classics, and the philosophy of language, as well as with mathematical, physical, and metaphysical facts and reasonings; and their acquisition enables the student to enter upon professional or political life with every advantage. Nothing, it will be observed, has been said of the modern languages. The valuable stores to be deduced from these, especially from the French and German, are of themselves attractions, which render collegiate compulsion or recommendation unnecessary. No one can now be esteemed well educated, who is thoroughly ignorant of them.

Thus far we have spoken of the requisites for a collegiate degree of graduate in the arts. It would be well, were every one—who is destined for a professional or other calling—capable of spending so much time at college as to pass through this prescribed course. But it, unfortunately, too often happens, that the means or the inclinations of the student, or of his parent or guardian, do not permit this. Still, although he may be denied the acquisition of honours, his studies ought to be made to embrace those departments of knowledge, which are required for a degree; and he who is unable to avail himself of collegiate instruction, should endeavour, as far as practicable, when his opportunities will permit, to improve himself in those departments.

When the faculty of the University of Virginia recommended, that no student should be permitted to graduate in any school of that Institution, unless he could give them satisfactory proofs of his ability to



write the English language correctly, the recommendation might seem to have been a work of supererogation, inasmuch as it might be presumed, that every one, before entering a higher school, had attended sufficiently to this matter. It is but too true, however, that the student is received into many of the colleges, after he has been employed in scraping together a few Greek and Latin words and phrases, although he may be lamentably ignorant of the literature, structure, and even of the commonest principles of the orthography of his own tongue. The organization of our colleges is defective in not having a department of English language, in which the studies of rhetoric, and the English classics, may be pursued practically. A chair, embracing these objects, should be established in all the higher schools, and a certain degree of proficiency, in the subjects taught in it, should be preliminary to every collegiate attainment. It would be an instructive and delightful study to trace back, as far as possible, the language of Britain to its aboriginal condition, and to follow up the changes impressed upon it, by the Keltic, Gothic, Roman, Saxon, Belgic, Danish and Norman invaders; the investigation being accompanied by elucidative references to the literature of the different periods. The poetry, romances, and the drama would constitute inquiries of abundant interest and information. To these might be added didactic and rhetorical exercises for improving the student in the practice of writing, not merely accurately, but readily, elegantly, and perspicuously. Such a professorship was wisely established in the University of London; but the example has not been followed by many—if by any—of the

higher schools on this side of the Atlantic. Yet it is lamentable to observe the ignorance of the vernacular, frequently displayed in the inaugural theses of candidates for distinction, not only in our literary, but in our professional schools. The composition is often not only objectionable in point of style; but its orthographical inaccuracies are discreditable to the industry and observation of the author; and it might be fairly inferred, that if he be faulty in these respects, the defect may extend to subjects of yet greater moment.

The education of the youth, who is intended for the medical profession, should be essentially that adapted for the well educated gentleman. There is no avocation that requires such fertility of resources; none that more demands all those facilities, which an acquaintance with the various kinds of reasoning above mentioned bestows. The study of medicine is essentially physico-moral. It demands, consequently, both physical and metaphysical reasoning: yet how few are there, who enter upon the study, whose minds have been properly tutored for its investigation. It is a prevalent belief, and as erroneous as it is prevalent, that a less degree of talent is required for a physician than for a lawyer; and, strange enough! we sometimes hear a parent speak of placing a son—of the strength of whose intellectual powers he has some doubt—to the study of medicine, because he is apprehensive that his talents might not enable him to succeed in the profession of the law. Occasionally, too, we hear the remark, that a certain individual ‘has a natural turn for physic;’ is, as it were, ‘born, a physician.’ The profession of the law doubtless requires some capabilities, which



that of medicine does not, to the same extent at least; but no department of science or of art demands greater judgment, a higher reach of intellectual qualifications, or a deeper preparation, by physical and moral culture, than medicine; and this has been the opinion of some of the brightest ornaments of science and literature. Some persons may take greater delight than others in the study. Some may attain a knowledge of its facts and principles with greater facility than others; but it need hardly be said, that he who has not a mind adapted for reasoning, and for judging, on other difficult topics of physical and moral inquiry, cannot possess these powers in reference to the intricate machinery and actions of the human frame, in health and disease; and it may be laid down as incontrovertible, that he, whose intellectual manifestations are generally feeble, cannot carry with him the necessary qualifications to the bed of sickness.

By the common consent of cultivated nations, the Greek has been selected as the language for the formation of the different compound terms employed in science; and hence—if on no other account—the utility of the medical student's being acquainted, to a certain extent, with that language. Independently of the advantage, which it gives him, of being able to peruse the works of the fathers of physic, in the language which they spake and wrote, it enables him to comprehend the various terms of science, and to store them in his mind with much greater ease, than when the medical vocabulary is placed before him without such a valuable aid to memory. In this respect, however, it affords

him facilities only. A want of acquaintance with the Greek shuts off altogether the perusal of the writers in that language from the pupil of science, but it does not altogether preclude—although it may impede—the acquisition of medical technology, any more than a want of acquaintance with the Anglo-Saxon precludes the attainment of a knowledge of English.

A certain knowledge of the sister language of antiquity, the Latin, is yet more necessary than of the Greek. In this country, and in Great Britain, especially in the latter, the custom is to write the prescriptions in that tongue; but some of the continental nations of Europe have discarded it, and now employ, exclusively, their vernacular. A good deal, as shall be shown hereafter, may be said in favour of adhering to the ancient practice. At present, it is enough to say, that no young man is fit to enter the office of either the physician or the surgeon, unless he is so far acquainted with the Latin language as to be able to comprehend, after a little instruction, the various directions that may be given for the preparation of extemporaneous and officinal formulæ. Serious accidents have arisen from ignorance on this point. Sixteen years ago, an action of slander arose between two medical practitioners—the plaintiff an apothecary, and the defendant a physician—which proceeded from the latter having prescribed some laxative medicine for a nervous and costive old lady. The prescription, after directing the constituents of the medicine, added, “*Repetatur si opus sit.*” The apothecary being absent, and his apprentice just from school, instead of construing the prescription properly, “to be repeated if occasion

should require," or, "if it should be necessary;" or, in other words, "if the first dose should not operate," wrote on the label, "to be repeated *if it operates*." The old lady, consequently, after having experienced the effect of the first dose, took another, and repeated it again and again, until she swooned from exhaustion. In alarm, the physician was sent for, who incautiously exclaimed, and afterwards repeated to others, "Coleman has killed my patient!" For this, the action was brought, and forty shillings damages, and about two hundred pounds costs, were awarded to the plaintiff.—(Chitty's Medical Jurisprudence, American edition, p. 11. Note.)

In another case, a medicine was directed by the physician to be given to a newly delivered female, and to be repeated, "*pro re nata*," or, "as occasion may arise." This is said to have been translated by an ignorant compounder—"for the little thing just born," which thus became the receiver of that which was intended for the parent.—("Tirocinium medicum," &c. &c. by William Chamberlaine, London, 1812, p. 76.)

The diplomas, and even the examinations, are yet couched, in some countries, in Latin, although many innovations have been effected in this respect. As regards the diploma, the University of Virginia has commenced the innovation of writing it in English, so that it may be intelligible to every one. It has been argued, in favour of these documents being in Latin, that it is a universal language with the learned, and therefore, that a diploma in this language will be understood every where: but this is not an argument of much practical weight. How rarely can it happen,

that this will apply to a graduate of any of the universities of the United States. On the other hand, the practice, at present pursued in most of our colleges, might lead to much imposture. How easy, for instance, for one who has a master's degree, or who has the diploma of membership in a medical society, to palm it upon the uninstructed for a doctor's; whilst, if the diploma were written plainly and concisely in English, no fraud could succeed. Besides, there is, too often, a style of composition any thing but Ciceronian.

The object of a medical diploma is to satisfy the community, amongst whom a physician may settle, that he has gone through a prescribed course of study, and has proved himself capable of practising his profession. It is, in many places, a permission to practise; although, in some of the states of the union, a farther diploma is necessary before he is regularly licensed to pursue his avocation. Such is the case, also, in London, and within seven miles of it. Every graduate of every university—with the exception of Oxford, Cambridge, and Trinity College, Dublin—is compelled to subject himself to an examination before the Fellows of the Royal College of Physicians of London, in order to be permitted to practise within the limits mentioned. In the state of Maryland, the graduates of the Universities of Maryland are allowed to practise without undergoing any examination; but this, we believe, is a privilege to the state universities only. No graduate of any other college of the union, or of any other country, can exercise his calling, without becoming one of the '*permissi*.' A similar law exists in Massachusetts. No one, who is not a doctor in me-

dicine of Harvard University, is a licensed practitioner in that State, until he has passed an examination before the Massachusetts Medical Society.

The form of the Maryland license is as follows:—

## **Facultas Medica et Chirurgica Marylandiæ.**

ANNO DOMINI MDCCXCIX, CONSTITUTA,

OMNIBUS AD QUOS PRÆSENTES LITERÆ  
PERVENERINT,

### **Salutem.**

**Quum** in chartâ nostrâ nobis concessum et confirmatum fuit, ut eos qui se literis bonis et artium liberalium studiis præcipuè ornaverint, nostra **Facultatis** gradibus decoremus et quum in ejus modi honorem tales imprimis viros evehi volumus, qui nobis cæterisque literarum studiosis, exempla præclara præbeant. Quumque ornatissimum virum — nobis amplissima peritiæ, doctrinæ et virtutis documenta peradmodum commendarunt. Ideirco, supra dictæ **Facultatis** auctoritate, conspirantibus suffragiis, eundem hujusce **Facultatis Socium** creavimus et constituimus, eumque virtute præsentis Diplomatis, singulis juribus, privilegiis, et honoribus, huic ordini quaquâ pertinentibus, frui et gaudere jussimus.

**Et** CUJUS REI TESTIMONIUM sigillum Facultatis præsentibus apponi fecimus nostraque nomina infra scripsimus.

Datum Baltimorii, die mensis ———, Anno Mundi salutis

———,

——— }  
——— } PERQUISITORES.

——— *Præses.*

——— *Scriba.*

The necessity for a local document, like the above, being in Latin, cannot well be urged on any ground except custom. It entitles the individual to practise

in the State of Maryland, and in that State only; and, therefore, on every ground, the vernacular ought to have been chosen. The document is liable, too, to the objection that may be urged against almost every thing of the kind, of unnecessary verbiage, leading to manifest injustice. If intended for those only "*qui se literis bonis et artium liberalium studiis præcipuè ornaverint*,"—for the "*ornatissimi viri*," alone,—the expressions must necessarily be incorrect as to some who have obtained it. In this respect, then, if in no other, the conception of the document is faulty.

Similar objections are applicable to the generality of diplomas issued from our medical and other colleges. The following is one of the most respectable of them.

## ACADEMIA — —

OMNIBUS AD QUOS HÆ LITERÆ PERVENERINT

## Salutem.

**Quum** vir ornatus et summis animi dotibus instructus — — postquam pleno gradu arti medicæ studuisset, nos honores academicos poposcerit, seque periculum sui facere in rebus medicis paratum ostenderit; per universam eum medicinam examinavimus.

**In quo** periculo cum scientiarum ac medendi artis se abunde peritum probaverit, nos dictum — — Medicinæ Doctorem creandum et declarandum censuimus, eumque Medicinæ Doctorem creavimus et declaravimus, et his literis **Doctorem** constituimus, atque apud omnes haberi et appellari volumus.

**Etique** facultatem plenissimam damus de re medica docendi et consultandi, et denique tam medicinæ theoreticæ



quam practicæ munera ubicunque terrarum excercendi, et omnes simul honores et jura, et privilegia ei concedimus quæ Medicinæ **Doctori** usquam gentium concedentur.

**In quorum** fidem literis hisce sigillo **Academiæ** communi munitis nomina nostra subscripsimus.

**Datum Urbe** ———, mensis ———, **Anno Domini**,  
———.

Signed by the trustees and the professors of the medical Department of the University.

All these diplomas are in the complimentary diction observed by the older Institutions of Europe, a diction which no one would think of employing, were he compelled to furnish a document of the kind in English.

Besides, what is the value of the '*vir ornatus et summis animi dotibus instructus*,' when applied to every one, who gains his degree; some of whom, it is well known, in spite of every endeavour of the examiners to execute their duty faithfully, will occasionally pass, without being by any means '*abunde periti*' in their profession. Were the candidate for graduation compelled to write his own diploma in good Latin, and were it known, that he did so write it, there might be this plea for adhering to ancient usages—that it would encourage the medical student to pay proper attention to his preliminary classical education; but this, as is well known, is not the case; and it is equally well known, that many a young man receives his degree, who is incapable of translating his diploma into English.

Such being the fact, no matter what may be the fancy, we think it more judicious, that the diploma should be written in English. Already it is so, as has been said,

in one university of this country; and the same course has been pursued by the Royal College of Surgeons, and by the Society of Apothecaries, of England; the apothecary, there, being a kind of sub-physician, required to attend regular courses of prescribed lectures, and to subject himself to an examination for license, before he can practise his profession in any part of England or Wales. He is the regular family attendant, the physician being called upon mainly in cases of consultation. The apothecary, too, prepares his own prescriptions as well as those of the physician,—in short, practises upon the plan pursued by all our country physicians, and by many of those in the towns.

The diplomas of those corporations are simple, but sufficient. They have the merit, too, of being written in good English, and of being intelligible to all. The following is that of the Royal College of Surgeons.

*Know all men by these presents*, that we, the Court of Examiners of the Royal College of Surgeons in London, have deliberately examined Mr. ———, and have found him to be fit and capable to exercise the Art and Science of Surgery.

We, therefore, admit him a member of the college, and authorize him to practise the said art and science accordingly.

In witness whereof, we have subscribed our names; and have caused the common Seal of the College to be fixed thereunto.

Dated the ——— day of ———, in the year of our Lord ———.

Signed by the Masters, Governors, &c.



The diploma of the Apothecaries' Society of London, is equally simple.

**We, the Court of Examiners**, chosen by the Master, Wardens, and Assistants of the Society of the Art and Mystery of Apothecaries, of the City of London, in pursuance of a certain act of Parliament, passed in the 55th year of the reign of his Majesty King George the Third, entitled an act for the better regulating the practice of apothecaries throughout England and Wales, do hereby, by virtue of the power, and authority in us vested by the said act, certify, that ——— has been by us carefully and deliberately examined as to his skill and abilities in the science and practice of medicine, and as to his fitness and qualification to practise as an apothecary, and we do hereby, for and on behalf of the Master, Wardens, and Society, farther certify that the said ——— is duly qualified to practise as an apothecary.

Dated the ——— day of ———, Apothecaries' Hall, London.

Signed by the Board of Examiners. /

These testimonials are altogether to the point. They depose only as to the evidence of knowledge exhibited by the candidate for graduation, on his examination. They say nothing as to the other intellectual and the moral qualifications of the individual, of which the board of examiners can rarely know any thing. We have before us the diploma of the "*Medical Society of London*," the oldest of that metropolis, and, for that reason perhaps, written in Latin; and if we are to credit its assertions, the members of the

society must be most distinguished, for their qualities of head and heart,—every one of the “*Socii*,” being admitted “*cum propter magna in artem Apollineam merita, tum propter summam humanitatem suavissimosque mores.*” The value of the testimonial is, however, greatly diminished by the fact, that these words are the standing portion of the document, and that when a new member is elected, on the proposition of some one or two of the body, his name is inserted in the blank, whatever may be his mental or moral manifestations. On the ground, then, of honesty, the testimonial is defective, and, were the sentence in English the objection would be so glaring, that its retention would probably be vindicated by no one. Yet, being written in Latin, it is tolerated; and the toleration affords some ground for the remark cited by Chitty, (Op. Citat. p. 11.) “that perhaps a mouthful of nonsense sounds better in Latin, or other dead language, than in English.”

How much preferable is the simple *Diplôme* of the sister Society of Paris—written in the vernacular of the country.

*Société de Médecine de Paris, instituée le 22 Mars, 1796.*

#### DIPLÔME.

La Société de Médecine de Paris, procédant aux termes de ses reglemens, a dans sa Séance du———, mil huit cent———, nommé——— (Membre) M.———.

A Paris, le———

Signed by the Members composing the *Bureau de la Société*, and its commission of administration.

In the establishment of the University of Virginia, the venerable customs that had prevailed for ages

were retained only when esteemed worthy of retention. Precedent was wholly disregarded. Its diploma is even more simple than any we have cited, yet, it is sufficient for all purposes; and the mere expression, that an individual has attained the highest honours, is properly regarded as ample evidence to the community, that he possesses the requisite qualifications for practising his profession, and that he is entitled to all the rights and privileges of the doctorate. The diploma is in English, and as follows.

### University of Virginia.

Mr. ————— has this day been declared a graduate in the School of Medicine of this **University**, with the title of Doctor of Medicine.

————— *Chairman of the Faculty.*

————— *Professors.*

————— *Secretary of the Faculty.*

A feeling of anxiety to encourage the study of the Latin language, has induced the authorities of some colleges to offer a reward for the best *Latin* dissertation presented by the candidates for graduation. Formerly, it was the custom, in every university, to have all the inaugural dissertations written in that language; but, in many—in this country, universally—the plan has been abandoned, and wisely, we think, inasmuch as the authorities have no evidence whatever, that it has been ‘done’ into Latin by the candidate himself. The converse, indeed, is often notoriously the fact; and it has happened to the author, officially, to have a candidate withdraw his dissertation, from

compunctions of conscience, and admit, at the same time, that it was not his own composition.

A much better course, for testing the classical attainments of the candidate for honours, is that followed in many medical institutions—of requiring him to translate passages from some author, as from Celsus, or the *Pharmacopœias*; or of conducting the examination altogether, or in part, in Latin; yet, there are objections to the last method, inasmuch as it is difficult to vary the questions sufficiently, and to go into as full an examination as may be necessary to test the medical qualifications. The plan may enable the examiners to judge of the student's acquaintance with the Latin language, but much farther it cannot go. Impressed with such views, the practice of examining in the dead languages, for graduation, has been abandoned in the University of Edinburgh, and we believe in the Scottish universities generally. It is doubtful, however, whether the total abandonment of every form of classical examination may not have had a similar effect to that which was ascribed by Lord Ellenborough to the statute requiring pleadings, proceedings, and records to be in English—that it has rendered attorneys and their clerks still more ignorant of the Latin language, and has caused the literature of the inferior part of the profession of the law to retrograde.

We have said, that in this country, and in Great Britain—especially in the latter—it is the custom to write the prescriptions in Latin. Attempts have been made to abolish this practice; but, although they have not succeeded in the United States, the ma-

majority of physicians are in the habit of writing every part of the prescription, except the names of the remedies, in English. A cause, assigned for this, is, that the apothecaries and their assistants are usually so badly educated, that if the directions were given in Latin, they would be unable to translate them; but this is a very insufficient reason, inasmuch as if all prescriptions were in that tongue, the education of the apothecary would be made to respond; and there can be little doubt, that the effect of the present practice, on the apothecary at least, has been similar to that described by Lord Ellenborough as resulting to the profession of the law from the change of practice above referred to.

The only objection, of any weight, that has been urged against writing the prescriptions in English is, that the patient might be able to detect whatever the physician is prescribing, and that therefore, in many cases, the latter might be precluded from using remedies, which he considered highly appropriate, but against which the former might have taken up some groundless prepossession; or that, in other cases, where the practitioner had wished to pursue an 'expectant' plan, his object might be defeated by the discovery, and conviction, on the part of the patient, of the inertness of the prescribed agents.

It has been farther urged, that patients and their attendants might thus ascertain the dangerous tendency of a disorder, and, becoming alarmed, recovery might be impeded or prevented. There is not much force, however, in these objections. Almost all the potent articles of the *materia medica*,—indeed almost all the

articles,—have a technical name, which so strikingly resembles the English, that there can be but little difficulty in discovering the medicine which the patient is taking. Mercury is perhaps the therapeutical agent, that most frequently suggests concealment, and where such concealment is required, the technical name, at present generally received,—‘*Hydrargyrum*’—is certainly preferable to the English appellation; but even this term is of modern introduction,—the Latin term, *Mercurius*, having formerly been universally employed. Moreover, the advantage of the present term is rather in its being *technical* than *Latin*.

As to the objection against the use of English—that patients and their attendants, by the exact knowledge of the components of a medicine, which, they had perceived, had succeeded in one or more instances, would be apt, without due regard to the variations in disorders, and in constitutions, and other varying circumstances to administer the same medicine on other occasions, when wholly inapplicable, and thereby produce the most baneful effects—it is hardly worthy of notice. It applies, indeed, to every extemporaneous formula, written in Latin or not. For, if such a formula were to succeed in any case, the patient or his attendants might have the prescription made up at the apothecary’s, and applied to the supposed case, with every evil consequence that has been suggested. Besides, it is very easy for a patient to have a Latin prescription rendered into English, and thus to obtain all the information he may desire.

Perhaps, after all, one great cause of the continuance of the present mode of writing prescriptions is.



## PRELIMINARY EDUCATION.

that veneration for antiquity, which vindicates the Latin as the language for diplomas. The whole form of the prescription is, indeed, a memento of by-gone periods, when Jove was invoked for his blessing on the medicine, and when symbols—unknown except to the initiated—were always employed. Medicine was then an ‘art or mystery;’ and the prescription of the physician equally with the labels on the bottles and boxes of the apothecary, conveyed the idea of that mystery, which has been properly designated as imperfect knowledge; but now, that this has been discarded,—that the arcana of the science are thrown freely open, and that the darkness and complicated dogmas of the schools have yielded to a better mode of reasoning and experiment, so that what was formerly taught and implicitly credited, as a dictum of the master, is now exhibited perspicuously and demonstratively, and, unless rendered intrinsically clear and intelligible, is unhesitatingly rejected,—these relics of a barbarous period ought to be discarded. If, however, the custom be retained, it is of some moment, that the prescriptions should be creditably written. Too often, we find a jumble of English and Latin, disgraceful to the merest tyro. Occasionally, indeed, in works, which, as regards their practical precepts, are looked upon as authorities, we observe faults in the formulæ, that could scarcely be expected from a boy on the fourth form of an ordinary preparatory school. In proof of this, the following prescription is taken from the work of a most respectable practitioner and professional writer. It is a form for the tartar emetic ointment, much used for exciting pustulation on the skin, in vari-



ous internal diseases, and it is cited from the *second* edition.

“R.—*Tartrite of Antimon.* Take Tartar emetic  
 ʒiss.  $1\frac{1}{2}$  dr.  
*Ol. lavend.\* veless. lem.†* Oil of Lavender or  
 gtt. xx. Essence of *bergamot*,‡ 20  
 drops.  
*Cerate simp.* ʒj. Simple cerate 1 ounce.  
 M. Mix.”

In the same volume is a ‘recipe’ for ‘Dover’s powder,’

“R.—Pulv. ipecac. pulv. opii. āā. ʒj.  
*Sulphate of potass.* ʒviij. M.”

And a formula for ‘nitrous powders.’

“R.—*Nitrate of potass,* ʒiss. Take Nitre,  $1\frac{1}{2}$  drachm.  
*Tartrite of antimony,* Tartar emetic,  
 gr. i. 1 gr.  
*Calom. ppt.* gr. iv. Calomel, 4 grains.  
*M. div. in* Mix and div. in 8  
 viij. parts.”

The Latin of the formulæ, where it is attempted throughout, is equally objectionable. We take two specimens from the same page.

R.—Hydrargyr. præcip. alb. ʒij.  
 Ess. *lemon.* § gut. xl.  
*Adeps* || præparat. ʒij. M.

and

\* Lavand † Lim. ‡ Lemon. § Limon. || Adipis.

R.—Flor. Sulph. ℥ij.  
 Pulv. muriat. ammon. ℥ij.  
 Ol. menthæ ℥i.  
*Adeps\** præparat. ℥iv. M.

The confusion of tongues, in some of the above, will be made more manifest by writing out the prescriptions at length. That for the ‘nitrous powders’ affords a good example.

Recipe.—*Nitrate of potass*, sesquidrachmam.  
*Tartrite of antimony*, granum.  
 Calomelanos præparati, grana quatuor.  
 Misce. Divide in octo (partes.)

The wit and sarcasm of Molière were properly directed against the physicians of his day; but we doubt whether he could have found better subjects for his castigation, than the specimens of medical Latin which we daily meet with. The classic address of the President of the Faculty, when he confers the doctor’s degree on Argan, is scarcely inferior to them.

“ Ergo cum isto boneto  
 Venerabili et docto,  
 Dono tibi et concedo  
 Virtutem et puissanciam  
 Medicandi  
 Purgandi,  
 Seignandi,  
 Perçandi,  
 Taillandi,

\* Adipis.

Coupandi,  
Et occidendi,  
Impunè per totam terram.”—(*Le Malade  
Imaginaire*, Intermède iii.)

Admitting, then, that it would be most important for every one who enters upon the study of medicine, as well as upon the other learned professions, to be able to peruse the writings of the sages of antiquity in the languages in which they wrote, it must be equally admitted, that where an individual has unusual strength of mind and application he may be enabled, after he has commenced his professional studies, and even after he has entered upon the active duties of his profession to acquire a considerable knowledge of the ancient languages, and even to become distinguished for his learning; whilst, again, we have many signal examples, which show, that professional distinction may be attained, where the classical attainments have been feeble, or where—if the preliminary classical education has been respectable—its fruits have not been available on occasions where they were needed. In elucidation of these positions, reference might be made to many individuals now living, who are highly distinguished as divines, lawyers, and physicians, but this would be invidious. The lives of the dead—the illustrious dead—are matters of record, and from an attention to them we may often discover the grounds for their distinction, and a careful investigation may depict to us defects, which prevented them from attaining a still more commanding elevation.

There is not a tyro in the profession, who has not heard of the name and abilities of the late Dr. Arm-

strong, who raised himself to eminence in his profession, in London, by his talents alone. Previous to his removal to the British Metropolis from the North of England, he had published his valuable works on Typhus and Puerperal Fever, and so distinguished had they made him, that when the lady of the author's friend, Mr. C. T. Haden,—himself a man of literary and professional merit,—was attacked with the latter complaint, Mr. Haden—impressed with the fatality of the disease, as then ordinarily treated, and having heard, that Dr. Armstrong was in town—went from house to house, where he was likely to obtain information concerning the doctor's lodgings, and, for a long time, without effect. Accidentally, he fell in with an individual, who directed him to where Doctor Armstrong resided; and to the judicious practice he pursued, Mr. Haden always ascribed the recovery of the partner of his bosom.

This was almost the first case, which Dr. Armstrong attended after his removal to London, and it was the nucleus of an extensive and lucrative practice. To Mr. Haden, he was previously entirely unknown, except by his works, proverbially the best demonstrations of the man. Yet this distinguished individual—distinguished in the annals of professional science—was rejected, when examined before the Royal College of Physicians of London, on account of his deficiency in the Latin language, although he had many years previously passed his examinations for a medical degree, in the University of Edinburgh, where the classical requisitions were considered to be even higher than in the London College. “In the spring or summer of

1818," says his biographer—Dr. Frank Boott ‘(Memoir of the Life and Medical Opinions of John Armstrong, M. D., Lond. 1833,’ p. 30.)—a native of this country, “Dr. Armstrong presented himself for examination at the London College of Physicians, conformably to its regulations, which require, that the graduate in medicine of any other University than Oxford or Cambridge should pass the ordeal of its favour, and obtain its license, before entering upon practice in London, or within a given distance of the metropolis. He had perhaps undervalued the estimate, which the Board of Examiners place on classical diction, and the alphabet of the profession; for this distinguished physician, who had received a diploma from the most efficient and most celebrated school of medicine in Great Britain, who had been in successful practice eleven years, and was the author of three of the most popular works, which the medical press of this country, (England), had ever put forth, the fame of which was still sounding in the periodical journals of the day, was rejected as incompetent to continue in the practice of his profession in London, and as undeserving the honour of having his name enrolled among the members of the college.”

It was well known, that Dr. Armstrong was not rejected for any want of professional attainments: the assumption of this ground would have been untenable. The regulations of the college required, and still require, that the candidate should be acquainted—to a certain, but to no great, extent—with the Latin language, and in this Dr. Armstrong was found deficient. The rejection, however, created a reaction in his favour. It

was regarded as an act of persecution, and was, thus, one of the elements of his future success; for, a vacancy having occurred in the London Fever Hospital, the rules of which excluded any one, who was not a fellow or licentiate of the college,—in order to obtain the desirable services of one, who had written so ably on Fever, and to show that their conviction of Dr. Armstrong's professional qualifications was ample, the governors of the institution rescinded the regulation, and appointed him physician to that important charity.

The true cause of Dr. Armstrong's rejection was, doubtless, his neglect of his previous classical attainments, whilst engaged in the active duties of his profession, and his confidence, that the London College would not reject him on a topic, which, in no way, involved his qualifications as a practitioner. He was, however, mistaken. Yet to a mind, sensitive like that of Armstrong, how galling must this rejection have been, especially as he was compelled to present himself, again, before the same tribunal, before he could enjoy the full privileges and immunities of his calling. This he did in the following year, when he was admitted one of the '*Permissi*,' or what are called '*Members*,' of the College of Physicians.

But, although Armstrong had neglected his classical learning, he was, from the commencement of his professional career, a severe student. No one felt more than he,—to employ the language of a modern writer on Medical Education ('Thoughts on Medical Education, addressed to the Council of the University of London,' by Dr. A. T. Thomson,)—that the moment a practitioner ceases to be a student, he is no longer



worthy of the confidence of the public, and that the life of a physician can only be truly useful and honourable, when it is unremittingly employed in study, in determining the truth of theoretical opinions by observation, and improving the value of practical suggestions by the test of experience. It was in this way, that Armstrong was,—as every distinguished man of science must be,—*self-made*. Whatever may be the amount of abilities, they cannot be developed without a certain degree of application, and although this amount may vary according to the precise capability, no marked developement can occur, in any case, without study. It is impossible to adduce the name of a single scientific physician, which has survived his existence, who was not through life a student. Collegiate honours, as has been properly observed by Montaigne, may form the pedestal: it is the man that forms the statue,—an idea, which has been repeated, in a modified manner, by the Scottish poet,—

“The rank is but the guinea stamp,  
The man’s the gowd for a’ that.”

Academic instruction and University degrees may place the candidate for professional eminence in the best road for the attainment of distinction, but, unless he continues to toil, he can never reach what ought to be the height of his ambition. It is to the scientific labourer in the closet, as well as at the bed-side, that medicine is mainly indebted for its improvement; for, however valuable may be the services of the professional adviser to those who may fall under his charge,



—and whatever may be his titles to the love and admiration of the profession and the public, for his enlightened and honourable conduct in the exercise of his duties—unless he publishes the results of his observations and reflections, they necessarily die with him. It may be said, indeed,—and is often said,—that the physician, who is much engaged in practice, cannot find time for such publication; but this objection is more specious than valid, and it is too often suggested, where there is a deficiency in the requisite qualifications. Besides, an overwhelming practice is not acquired until after the lapse of a considerable period, during some portion of which the inclination and the power will be exhibited if they exist,—as the ground of excessive occupation cannot then be assumed. The truth, indeed, is that several of the most useful practical works we possess have emanated from persons enjoying an amount of practice not to be attained in situations where the sphere is more restricted. Some of the most valuable of the productions of Sir Astley Cooper made their appearance after he was fifty years of age, and when he was enjoying an extent of practice, which has never, perhaps, fallen to the lot of another individual. In the life of Sir Astley by his nephew Mr. Bransby Cooper, (London, 1843) it is stated, that his professional income was, at one time one hundred thousand dollars,—a larger amount than was probably ever acquired in the same time, by any member of the profession,—of the present, or of any by-gone period.

Perhaps a more signal example of the results of genius aided by perseverance in the pursuit of know-

ledge, and in the absence of the advantages of education, could not be selected than that of John Hunter,—one of the most profound, original, and successful investigators into the mysteries of the animal economy that ever existed,—especially when the condition of medical science, at the time when he entered upon his useful career, is borne in mind. Hunter's education was extremely neglected. He was, in the first instance, apprenticed to a cabinet maker; but, hearing of the success of his elder brother—the celebrated Dr. William Hunter—in London, he offered his services to him as an anatomical assistant, which were accepted, in the year 1748, when he was 20 years old. In this situation, he improved so rapidly, that in the following winter he was able to undertake the office of Demonstrator to the class. In 1755, he was admitted to a partnership in the lectures delivered by his brother; and, from this period, we may date the commencement of those labours, which have stamped him as one of the greatest promoters of medical science that have ever lived. The Windmill street school—originally founded by the Hunters, and supported by the industry and talents of some of the best anatomists and physiologists of the British Metropolis—is a monument of their zeal for the advancement of a profession, of which they were such splendid ornaments.

From this humble commencement, aided, it is true, by his scarcely less distinguished brother, John Hunter rose to the highest scientific eminence. He was elected a Fellow of the Royal Societies of London and Göttingen, and of the Royal Society of Medicine, and Academy of Surgery of Paris: and died, in 1793,

Inspector General of the Hospitals and Surgeon General to the Army,—leaving behind him a reputation unequalled by his predecessors, or by any of his countrymen, who have succeeded him in the career of scientific glory.

“Some when they die, die all; their mouldering clay  
Is but an emblem of their memories:  
‘The space quite closes up through which they pass’d.  
That HUNTER liv’d, he leaves a mark behind  
Shall pluck the shining age from vulgar time,  
And give it whole to late posterity.”

Independently of his various excellent works, with which every medical student must become more or less acquainted in the course of his professional education, some idea may be formed of the industry of the man, from the fact, that his museum—consisting chiefly of healthy and morbid preparations in human and comparative anatomy—was sold to the British Government for 15,000 pounds sterling, or nearly 70,000 dollars. It now forms the basis of the extensive Hunterian Museum of the Royal College of Surgeons of London.

To keep alive the proper remembrance of this great man, the Hunterian oration is annually delivered in the Hall of the Royal College of Surgeons, by one of the most distinguished Surgeons of the Metropolis.

The chief part of Mr. Hunter’s labours appears to have been of a professional cast, and his knowledge was greatly confined to the efforts of his own countrymen. The deficiencies of his early education, and the time, which he devoted to his purely professional stu-

dies, prevented him from learning those languages, without some knowledge of which—at the present day at least—it is difficult to keep pace with the progress of medical science.

In the late Dr. John Mason Good, who died not longer ago than the year 1827, we have an illustrative instance of the practicability of acquiring high professional distinction, with the most exalted reputation for literary attainments, where the preliminary education must evidently have been limited,—from the fact, that, at the early age of fifteen, he quitted the house of his father, who had the pastoral charge of an Independent church and congregation, at Epping, in Essex,—and who, at the same time, superintended the education of a few young gentlemen,—to be apprenticed to a surgeon-apothecary. Prior to this, he had obtained some knowledge of the Latin, Greek, and French languages, but he had none of the advantages of collegiate instruction. So ardent, however, was he, in the pursuit of knowledge, and so desirous of attaining it through every available channel, that he applied himself—whilst acquiring a knowledge of his profession—not only to the study of different Teutonic, Romanic, and Slavonic languages, but also of many of the Oriental.

At the age of 26, he commenced the study of Hebrew, of which he soon acquired a clear, and critical knowledge: and seven years after this, he began his translation of Lucretius, for which he was, at one time, more celebrated than for any of his professional

productions. This undertaking stimulated him to the study of various other languages,—in the first instance to enable him to search successfully for parallel passages, but afterwards with much more enlarged views. ('Memoirs of the Life, &c. of Dr. Good:' by Olinthus Gregory, LL. D. Amer. Edit. p. 57.)

In a letter to his friend, the late Dr. Nathan Drake—the well known and accomplished author of several literary productions of merit—dated in 1799, or when he was 25 years old, he says: "I have just begun the German language, having gone, with tolerable ease, through\* the French, Italian, Spanish, and Portuguese." In a few months afterwards, he sent specimens of his translations,—especially of pieces of elegant poetry—to Dr. Drake, and other friends. In the following year, he informs Dr. Drake, that he had been sedulously studying the Arabic and Persian; and, at no very remote period, the Russian, the Sanscrit, the Chinese, and other languages engaged his attention.

In the acquisition of these different languages, he did not follow the beaten and irrational track, of learning the grammar by rote, as it were, but adopted the more natural one, of gaining the vocabulary of the language first, as the child gains its mother tongue, and subsequently correcting the construction by a due attention to grammatical rules, many of which apply equally to all tongues. By such a method, he did not attain a critical knowledge of all, but he possessed such

\* To 'go through' a language is a very common, although obviously inaccurate, mode of expression,—employed, in various parts of Great Britain, to signify, that the person has read the usual books employed in acquiring the language.

an acquaintance with them as was sufficient for useful purposes. "It gave him," says his biographer, Dr. Olinthus Gregory, "the capacity of detecting and relishing the beauties of the best authors, in those languages, which he was most anxious to explore; and it supplied him with views of the general analogies of language—as well as of the diversities and peculiarities, which prevented those general analogies from becoming universal—more comprehensive, and more practical than any other person (except he were a linguist merely,) whom I have had the happiness to know."

About this period, Mr. Good—who was at the time, and until the year 1820, when he was 56 years of age, a 'general practitioner,' (surgeon apothecary)—contributed largely to the Reviews and other periodical publications, of one of which, the 'Critical Review,' he was for some time editor, and the labour of preparing the most elaborate articles often devolved upon him. In the beginning of 1803, his occupations were astounding. He was finishing his translation of Solomon's 'Song of Songs' from the Hebrew; carrying on his life of Dr. Geddes, and walking from 12 to 13 miles a day, that he might see his numerous patients,—the amount of his professional income being, at this time,—according to his own account,—upwards of £1400, or about 6,300 dollars, per annum. Nothing—it is obvious—but the greatest energy, and order, in the management of his multifarious occupations, could have enabled him to accomplish them; yet he effected all, and all satisfactorily.

These habits, and this activity of character, continued through life; and the author has been told by a



clerical friend, who knew him well, that—like every one who employs his time to advantage—he was never busy, but could always spare time from his various labours for social and domestic enjoyment. In this respect, he resembled one, whose productive powers surpassed those of any other individual of modern times, and on whose transcendent genius it would be idle to dwell. When Sir Walter Scott was asked by a literary friend, how many hours a day he could write for the press, with effect, he replied,—“I reckon five hours and a half a day as very good work for the mind, when it is engaged in original composition. I can very seldom reach six hours; and I suspect, that what is written after five or six hours’ hard mental labour is not worth much.” On being asked, how he divided those hours, he said,—“I try to get two or three of them before breakfast, and the remainder as soon after as may be, so as to leave the afternoon free to walk, or ride, or read, or be idle.” (*Fragments of Voyages and Travels*, 2d and 3d series, by Captain Basil Hall, Chap. 1.)

That Dr. Good was a laborious student whilst he did study, until within a short period of his death, is sufficiently shown by his ‘*Physiological System of Nosology*,’ published in 1820; his ‘*Study of Medicine*,’ which appeared in 1822, in four thick octavo volumes; and his ‘*Book of Nature*,’ published in 1826,—the year before his death:—all of which have been reprinted in this country, and are referred to, more or less, by every professional inquirer.

But it is not necessary to travel to other countries



for examples of what unwearied industry, aided by ability, is capable of accomplishing, when we have so signal an example in a native of this country, and a graduate of the University of Maryland, of which he was one of the most distinguished alumni. We allude to the poor, once almost friendless, and subsequently afflicted, but admired, and now lamented, Godman, who, in spite of every disadvantage from fortune, and notwithstanding his brief career,—for he died at the early age of thirty-six,\*—and much of that career spent in sickness and suffering, succeeded in elevating himself to a high rank among physicians and naturalists. The period that has elapsed since he passed away from us is so brief, that the merited eulogies in the different periodicals are known to almost every one. His example, too, has already been selected by more than one teacher, as the load-star for the guidance of the professional inquirer. From the loss of both his parents, Dr. Godman was early compelled to feel that his future success must depend altogether on his own talents and industry. At an early age, he was apprenticed to a respectable printer in Baltimore, but he soon quitted the occupation as not congenial to his taste, and entered, as a sailor, on board the *Flotilla*, which was then, in the fall of 1814, stationed in the Chesapeake. At the close of the war, when twenty-one years of age, he followed the bent of his inclinations, and immediately

\* Most of the notices say thirty-two; but in a letter to his friend, preceptor and benefactor, Dr. Luckey, he asserts, that he had discovered his real age in an old book of his father's, and that he was twenty-one years old the 20th day of December, 1815.

commenced the study of medicine,—first under the tuition of Dr. Luckey, of Elizabeth Town, Pennsylvania, and soon afterwards under that of Dr. Wright, of Baltimore—a gentleman of high professional merit. It is not necessary to dwell on the various details of his brief history;—how he became successively Professor of Anatomy in the Medical College of Ohio, and subsequently in Rutgers' Medical College, established in the city of New York. The main incidents of his life are familiar to his professional countrymen, or, if not, can be readily learned by a reference to any of the memoirs that have been published. (See, especially, the 'Memoir of Dr. Godman,' by Dr. T. Sewall, of Washington City.) In those incidents, and in his various publications on medicine, and natural science, we have a signal illustration of what may be acquired, if it be sought after in the proper manner.

Like Dr. Good, Dr. Godman early directed his attention to the ancient and modern languages as the causeways of knowledge; and notwithstanding the limited nature of his early education, he had acquired, we are informed, such a knowledge of the Latin, Greek, French, German, Danish, Spanish, and Italian languages, as to read and translate them with fluency, and to write some of them with elegance. "Considering the decline of his health, for a long period," says an eminent literary eulogist, Robert Walsh, Esq., "and the pressure of adverse circumstances, which he so frequently experienced, he performed prodigies as a student, an author, and a teacher; he prosecuted extensive and diversified researches; composed superior disquisitions

and reviews, and large and valuable volumes; and in the great number of topics, which he handled simultaneously or in immediate succession, he touched none without doing himself credit, and producing some new developement of light, or happy forms of expression." He lingered for years under pulmonary consumption; understood fully the incurable nature of his melancholy condition; spake and acted—we are told—with an unfeigned and beautiful resignation; toiled at his desk to the last day of his existence, and still glowed with the love of science and the domestic affections.

Personally, the author had no acquaintance with Dr. Godman; but, a few short months before his decease, he entered into a correspondence with him, regarding a new genus of fossil quadrupeds—the subject of Dr. Godman's last communication to the "American Philosophical Society," and contained in the third volume of the Society's "Transactions." In this publication, he courteously refers to the insignificant service which the author was able to render him; and, in the course of his correspondence, and not more than three months before his death, speaks of his intention to publish a work on "Myology," and adds,—"If you have any observations of interesting anomalies or varieties in the muscular system, I shall be delighted to have an opportunity of adding a communication of them from your hand." Yet, in the very letter that contains this postscript, he says,—"Since that time, (alluding to the visit of a mutual friend, Dr. R. M. Patterson, three weeks before) "until within two days since, I have been confined to bed, and unable to see any one but

my physician. Indeed, I am very little better now.”—What a striking exemplification of the mind—beautifully depicted by Byron—“which disease and poverty could not impair, and which death itself destroyed rather than subdued!”

In the contemplation of the termination of his sufferings, we find additional evidences, to those already possessed, of the inaccuracy of the deduction too often made,—that the pursuits of the investigator of the animal structure, and especially of that of man, are apt to lead to difficulties and doubts regarding his future destination. In some “Lines, written under a feeling of the immediate approach of death,” he breathes out the results of his private meditations, and exhibits poetical powers, which, if cultivated, might possibly have gained him some distinction, in a department of the imagination, not often associated, in the same individual, with the more sober efforts of the judgment required in the pursuits of science.

These are a few—a very few—examples, selected from a host of professional worthies, to exhibit what zeal and enthusiasm in the pursuit of knowledge are capable of effecting; and what honours and reputation may be acquired, by time well spent—not only whilst in the preparatory study of the profession, but during its active exercise; yet what an amount of subsequent labour would have been saved those distinguished men, had their early education been more complete! Although, therefore, their examples exhibit, that professional and literary eminence may be attained in spite of such disadvantages, they equally show the import-

ance of early culture to prepare the way for more decided usefulness thereafter.

Of the modern languages, the French and the German should be studied by every one desirous of excelling in professional lore. The march of mind has been so steady and rapid in France and Germany, and so much attention has been paid there, in modern times, to the improvement of medical—and, indeed, of every kind of scientific—knowledge, that no one can well keep pace with the progression of science, unless he is able to peruse the works that are constantly emanating from the press in those countries. It is true, that many of the best productions are translated into our own tongue, and that the important contents of their scientific periodicals are transferred to the pages of our miscellanies, either directly, or through the medium of the journals of Great Britain;—still, much remains uncultured, and many of the most valuable works are of such a size, and character in other respects, as to preclude the publication of an English version. At the present day, there are few youths, who are not required to study the French language, and no one, perhaps, ought to enter within the pales of the temple of *Æsculapius*, who is not more or less acquainted with it. There is certainly more reason to hold out inducements for the study of this language than of the Latin. There was a time—in the middle ages—when all knowledge was confined to the cloisters, and when it was kept so, in order that the mass of the people might remain unenlightened, and power be restricted to the priesthood, by whom the medical art was wholly prac-

tised; and even after the revival of letters, the works of the learned were always written in Latin, in order to distinguish them from the “*profanum vulgus*.” But when the modern languages emerged from their patois state, and attained the requisite cultivation, the ancient plan was abandoned, and at the present day, except in inaugural dissertations, in certain schools, such a thing as a Latin work on any department of science is rarely seen. The knowledge, consequently, of the Latin language, which was at one time *indispensable*, is now only *advisable*; but it has become almost indispensable, that the student should be acquainted with the chief languages in which the most valuable contributions are now written. Within the present century, the science of medicine has been prosecuted in France with a degree of enthusiasm and success before unknown, even in that cultivated nation; and many of the authors, whose productions we strongly recommend—and, in some of the departments of medicine, the principal authors—are of that country.

Where the opportunities of the student will permit, the Italian and the Spanish, of the Romanic stem, and the Danish and Swedish, of the Teutonic, will amply repay him for the time and trouble, which he may devote to their acquisition. Italy was, at one time, the favoured land, in which the tree of medical knowledge flourished, and spread its branches towards the other nations of Europe. Its universities were visited by the medical students of Great Britain and other countries, to partake of the rich fruits there presented to them, and the reputation of many of her then professors will descend to posterity, along with that of those master spirits of antiquity to whom she owed



her pristine glory. The various political revolutions, to which she has been subjected, in the present century, have checked the ardour of scientific investigation: still, we are indebted to her for many valuable works on the healing art, especially in the domain of Surgery, amongst which those of the distinguished Scarpa stand forth in bold relief.

Lastly—There is one useful accomplishment, which may be recommended to form part of the education of every youth, intended for the medical profession;—the art of drawing,—especially as regards the parts of the human figure. Every one, who is ignorant of this art, must have regretted his inability to take the representations of striking cases of malformation or disease, the recollection of which he may have been desirous of perpetuating. Now—that the custom is universally followed by the medical teacher, of addressing the eye by graphic illustrations, where the subject will admit of it—such an acquirement is doubly useful. How impaired in interest would be the ‘Anatomy of Expression’ of Sir Charles Bell, if deprived of the embellishments from his pencil. Where the student has the least taste for designing, it ought to be fostered, and he will find ample opportunity, in after life, for being gratified with the attention he has given to it. The art of taking moulds is one, that can be readily acquired whilst his professional education is proceeding. There are manuals, indeed, which teach the different methods of making anatomical preparations,—of which the taking of casts is one. All this is easily attained by a little practice.



## CHAPTER II.

### MEDICAL EDUCATION, PRIOR TO ATTENDANCE ON LECTURES.

THE regulations for graduation of the chief medical colleges of the union require, that the student shall have applied himself to the study of medicine for three years, and that he shall have attended two full courses of medical lectures,—embracing the different departments to be enumerated hereafter. In the University of Pennsylvania, it is a rule, that during these three years he shall have been the private pupil, for two years at least, of a respectable practitioner of medicine. The latter part of this requisition is, however, rarely attended to: indeed, if the student, attending the prescribed courses of lectures, be from the country, where he has already studied one year, it will be obviously impracticable for him to complete his two years—in succession, at least—with the same instructor; and, if the rule were rigidly enforced, he would necessarily be constrained to seek a new preceptor on his arrival in town. In the Jefferson Medical College, the rule requires, that the candidate shall have applied himself to the study of medicine for three years. without specifying the period of private pupilage: whilst at the University of Virginia, no term is mentioned. The candidate is allowed to present

himself for examination, at the end of the first session, if he feels himself qualified. In the universities of Europe, no rule—as to private pupilage—exists. The candidate is required to have attended certain courses of lectures a prescribed number of times. After this, he may subject himself to examination, and, if found competent to practise his profession, he receives his diploma. A similar rule prevails—or did prevail—at the Royal College of Surgeons; but the Society of Apothecaries, of London, demand, that the student shall have served an apprenticeship with an apothecary for five years, as well as have attended a certain number of courses on medicine, before he can present himself before the Board of Examiners. Generally, however, when circumstances will allow of the indulgence; he is at liberty to attend lectures during the last two years of his apprenticeship; so that, if his age will permit, he may present himself for examination, at the time when his indentures are given up to him. This is the general practice with the metropolitan youths; as well as with many of those in the country; but some of the latter are retained to make pills and draughts, until the full period of five years has expired. The student is, indeed, in the latter stages of his apprenticeship, of greater value to his employer, so that if he be of steady and industrious habits, it is greatly to the master's interest to retain him. Preparing, as he does, his own medicine, the apothecary can teach him the practical matters, connected with the compounding of medicines, and the sensible and medical properties of drugs. He instructs him, moreover, how to bleed, glyster, draw teeth, &c.; and, not many years ago, it

was the practice, in some of the country places of England,—and perhaps still is,—to require, that the medical pupil should attend to the horse, if his employer kept one,—see that it was regularly groomed, fed and watered, and bring it saddled to the door on all sudden emergencies! What an employment for the future member of a liberal and learned profession! and what a waste of time in a pupilage, thus unnecessarily protracted! The advantage to the master was looked to in these requisitions, rather than that of the student;—a well-informed youth—well-informed, that is, on preliminary topics—and of ordinary abilities, being capable of attaining every thing taught him, in this long apprenticeship, in a single year well spent.

In the towns of the United States—as has been before remarked—it is the custom for the physician to send his prescriptions to the apothecary, who fills the same situation as the chemist and druggist of England, and the *pharmacien* of France. There are some, however,—especially of the older practitioners,—who have their prescriptions compounded in their own offices. As respects medical education, it is to be regretted, that the latter course is not universal, inasmuch as it affords the youth an admirable opportunity for becoming practised in the manipulations of pharmacy. Nothing but actual practice can make him well acquainted with the sensible properties of the various articles of the *Materia Medica*, and with the mode of preparing the different formulæ—officinal and extemporaneous; and when the physician, who has office-pupils, does not prepare his own prescriptions at home, he ought, at least, to be provided with a collection of

specimens of the *Materia Medica*, which may enable the student to render himself familiar with their appearance: but this is only an imperfect succedaneum, as it does not instruct him in the art of compounding. Many young men, consequently, pass through their medical education, and receive their diplomas, without ever, perhaps, having made a pill or a potion, and utterly ignorant of the method of uniting the articles, which they may have to prescribe at the outset of practice. Where persons can be found to do this—as in the cities—the evil is not of magnitude; but if the young practitioner has settled in a country situation, where no one can prepare his medicines for him, he finds that he has yet much to learn, and has ample grounds for deploring the imperfections of his pharmaceutical education. Formerly, it was common for the enlightened physicians of Great Britain to place their sons in some pharmacy, for a time, in order that they might attain that practical instruction, which such situations alone afford; but, of late years, the plan has been generally abandoned, and the physician, after he has passed through his three or four years of collegiate study, finds himself lamentably deficient in knowledge on this matter; although, fortunately, owing to the division of labour in the profession there, a physician can no where be found, without one or more apothecaries, or chemists and druggists being easily met with, by whom the formulæ can be compounded.

It has been a question with some, whether it is advisable for a young man to ‘read’—as it is termed—with a physician, before he commences his attendance on lectures? The regulations of our colleges, it has been

seen, appear to contemplate that one year, at the least, should be so spent. The answer to the question will have to vary according to circumstances. There can be no doubt, that a well informed physician might put the tyro upon a course of study, which would materially benefit him: he might, too, be making him acquainted with the various therapeutical agents, and thus besit him for deriving full benefit from his collegiate course;—but, there can be as little doubt, that an almost irreparable amount of mischief may be perpetrated by an unskilful preceptor: doctrines may be instilled, which a length of time and labour only can displace, and habits of study may be engendered,—by no means adapted for satisfactory or enduring results. Under such circumstances, it would be better, that the mind of the student were a *tabula rasa*—an unsullied sheet—capable of receiving any impression, that may be made upon it; and of retaining such impressions unblurred by the defective observations—the ‘facts’ and hypotheses—of such as are themselves incapable of correct judgment.

But it is not only essential, that proper books should be placed in the hands of the student; there should be an appropriate selection of subjects, to be investigated by him in due sequence. It often happens, that the very first book put into his hands, is on the ‘practice of physic,’—the department towards which all the others tend, and which cannot be comprehended without an adequate knowledge of its elements. It includes, in short, an acquaintance with Anatomy, Physiology, Pathology, General Therapeutics, Materia Medica, and Chemistry. In other words, when an impor-

tant organ is diseased, we must know the structure of the organ; the function which it executes in health; the characters of that function, when in a state of aberration; the indications to be laid down for transmuting the diseased into the healthy condition; the agent capable of carrying into effect such indication; and—if we put more than one article into the prescription—we must know, that the articles are not incompatible, unless we desire the chemical results of such incompatibility.

One of the greatest stumbling-blocks in the path of the young student—and to the removal of which his endeavours should be early directed—is the heterogeneous nomenclature in use, in all the departments of medical science, and which will probably be continued, —notwithstanding the various attempts to introduce some greater uniformity and simplicity—in consequence of the difficulty, that exists in every science, of modifying appellations, which are familiar to the older members, and any change from which must necessarily be attended with great inconvenience to them.

Another difficulty is, the formation of a nomenclature of a character satisfactory to all. In every science, terminology is an object meriting attention: and each term—if well chosen—should convey to the mind of the student a definite idea. The Lavoisierian nomenclature was a valuable gift to chemistry, and a salutary innovation upon established usages; but all the difficulties, that pervade nomenclatures in general, were found to apply to this; and, accordingly, many of the old names are still retained, and will be



so, in spite of the efforts of the scientific chemist. This is strikingly evidenced in the cases of *calomel*, and *corrosive sublimate*,—substances, which, although differing essentially in their action on the animal economy, do not differ so much in their chemical constitution. Any nomenclature, consequently, which is founded on chemical composition, must assign names to each somewhat similar. Accordingly, as they are both Chlorides of Mercury, the former has been termed the ‘Proto-chloride,’—the latter, the ‘Bichloride.’ The London College terms them, erroneously, ‘Submuriate,’ and ‘Oxymuriate;’ whilst the Pharmacopœia of the United States calls the one, the ‘mild chloride,’ and the other the ‘corrosive chloride,’ of mercury.

Now, where there is so slight a difference in name, between an entirely harmless, and a most poisonous, chemical, mistakes may readily happen,—in compounding prescriptions, for example,—as is said to have been the fact, in more than one instance, soon after the change of name by the London College of Physicians,—the virulent ‘oxymuriate’ having been substituted, by accident, for the mild ‘submuriate.’ This probably led the Dublin College—not behind the sister institutions of Great Britain, in chemical knowledge—to retain the name ‘calomel’ for the one, and to adhere to that of ‘corrosive muriate of mercury,’ by which the other—the ‘corrosive sublimate’—was, formerly, generally known.

Another reason, too, which has prevented the full adoption of the modern chemical nomenclature, is, that with the new lights, daily breaking in upon a science so constantly improving as chemistry, the views of



chemists, regarding the precise composition of substances must change; and therefore, the names,—to keep pace with the science,—must undergo a corresponding mutation. Still, to one who travels with the progress of science, this is no disadvantage; and to him who does not, the modified name indicates, at once, the new ideas that are entertained of the composition of the article.

The same difficulties, in innovating on an established nomenclature,—however faulty it may be,—apply to Anatomy, where all is fixed; and although Barclay, Dumas, Chaussier, and others, have attempted to give names to parts indicative of their situation, connexions, &c., the old unmeaning names are still retained, and the anatomical teacher, who is most anxious to keep up with the spirit of the times, feels it difficult—nay impracticable—to introduce so great a change:—

“Such dupes are men to custom, and so prone  
To rev'rence what is ancient, and can plead  
A course of long observance for its use.”

The truth seems to be, that where the English language is spoken, there is a greater objection to the introduction of new words than elsewhere; and, accordingly, almost all our new scientific terms are coined in France or Germany, and then imported into Great Britain, and this country; as if the transgression were more venial—to give currency to the coin than to fabricate it. “Neology, or the novelty of words and phrases,” says the author of the ‘*Curiosities of Literature*,’—(‘*Second series*,’ Vol. I. 251, Amer. Edit. Boston, 1834,)—is an innovation, which, with the opulence of

our present language, the English philologer is most jealous to allow; but we have puritans or precisians in English, superstitiously nice! The fantastic coinage of affectation or caprice will cease to circulate from its own alloy; but shall we reject the ore of fine workmanship and solid weight? There is no government of words, and it is no statutable offence to invent a felicitous or daring expression, unauthorized by Mr. Todd."

The same objection to the introduction of new words prevailed, however, long before the language attained its present opulence. In one of our old plays, the neologist is described as one, who,—

———"Strikes no coin, 'tis true, but coins new phrases,  
And vends them forth as knaves vend gilded counters,  
Which wise men scorn, and fools accept in payment."

Yet it is somewhat strange, that the objection should have extended, with us, to the introduction of new scientific terms. As science improves, the words, previously in use, are insufficient to express the new ideas, and neologisms become not only pardonable, but indispensable. Fortunately, the French and German literati have an insatiable desire for this application of philology, so that the toil of invention is spared us; and all that is necessary is to make a judicious selection.

The nomenclature of disease has required the greatest attention, and although repeated attempts have been made to improve it, the barbarous terms, sanctioned by usage, are still retained, in preference to the more classical. As it now exists, it consists of Hebrew and Arabic terms; Greek and Latin, French, Italian,

Spanish, German, English, and even Indian and African, often barbarously and illegitimately compounded.—(Dr. J. M. Good, in ‘Transactions of the Medical Society of London,’ vol. i. part I. p. 3: and sect. ii. of a Preliminary Dissertation to his ‘Physiological System of Nosology.’)

The object of modern terminologists has been to rectify this chaos; and, by the use of a learned language, which admits of the ready formation of compounds, and which is every where more or less studied, to apply names, that may indicate the suffering organ, or the precise character of the morbid derangement, so far as this can be done by names only. But, where so much latitude is permitted, it would be strange if the privilege were not occasionally abused, and if terms were not, at times, proposed merely to exhibit the learning of the inventors. Accordingly, we find such words as *pathopatridalgia*, *philopatridalgia*, and *philopatridomania*, applied to the affection, commonly termed *nostalgia*,—a variety of melancholy, produced by the desire of returning to one’s country or home, and which is described, by the French medical writers, as having been extremely common amongst the troops,—and especially amongst the auxiliaries from other countries,—formerly sent on their distant expeditions.

The *ne plus ultra*, however, of terminology ‘run mad,’ is to be found in a treatise on ‘Croup,’ published within the last twenty years, by M. Blaud,—a respectable French physician. This disease,—too well known amongst us, and indeed in almost every nation of Europe, by its English name *croup*,—inasmuch as it is seated in the parts of the windpipe, called the larynx and trachea, and as the inflammation is accompa

nied by increased secretion of mucus,—sometimes of pus, sometimes of membrane, and sometimes of all together,—M. Blaud proposes—with the view of comprising all these conditions in the name—to call by the scarcely pronounceable one of *laryngo-tracheite-myxa-pyo-ménin-gogène*.—So far the term has, happily, rested with its propounder.

It is fortunate for the student, that although medical technology is sufficiently copious, and, at times, extravagant, such an unnecessary tax is rarely, if ever, imposed on the memory, as in the case of the instances cited. Considerable simplicity will, indeed, be found to exist, even where the first impression may have been one of complexity. Still, as Dr. Good has properly remarked, a serious evil is the want of a common principle upon which the technical terms of medicine have been founded. They have been formed:—*first*, from *colour*: and hence there are black, white, green, red, scarlet, yellow and purple diseases,—as *melæna*, *melas*, *atrabilis*, *melancholia*, *leuce*, *alpos*, *albugo*, *chlorosis*, *rosa*, *roseola*, *rubedo*, *rubeola*, *erythema*, *scarlatina*, *icteritia*, *aurigo*, *purpura*, &c. *Secondly*:—they have been designated, according to *time*;—as acute and chronic; ephemeral or quotidian; continent or continued; remittent and intermittent; tertian, quartan, quintan, autumnal, and vernal fevers; summer complaint, &c. &c. *Thirdly*: from objects of natural history,—*birds*, *beasts*, *fishes*, *insects* and *plants*,—as *fames canina*, *cynorexia* (*dog-hunger*;) *rabies canina*, *cynolissa* (*dog-madness*;) *hippus* (*horse twinkle*;) *scrofula* (*swine evil*;) *elephantiasis* (*elephant skin*;) *ichthyosis* (*fish skin*;) *cancer*, (*crab ulcer*;) *tarantismus* (*tarantula dance*;) *urticaria* (*nettle rash*;) *lichen* (*liverwort rash*;) &c.

&c. &c. *Fourthly*: from the names of *persons* or *places*; as morbus Hercules (*epilepsy*;) facies Hippocratica; lepra Arabum; lepra Græcorum; plica Polonica; sudor Anglicus; morbus Gallicus; morbus Hungaricus; ignis Sancti Antonii; chorea Sancti Viti; Dæmonomania, &c. &c.

The nomenclature of anatomy is not less fantastic. Often, it is dependent upon fancied resemblance; as to basins (*pelves*;) cups (*cotyloid cavities*;) the beak of a crow (*coracoid*;) a thorn (the *spine* and *spinous* processes;) an ancient pen (*styloid*;) and, in the brain alone,—as Dr. Good has remarked,—we meet with an assemblage of terms so ridiculously diversified in their sources, as frequently to overpower the gravity of the face in running them over; and at the same time so obscene in many of their references, as to render it impossible to read them aloud except in a dead language.—(‘Transactions of the Medical Society of London,’ Lib. cit. p. 13.)

To facilitate the labours of the student, in acquiring some of the principles of medical technology, as it now exists, the following glossary of the prefixes, suffixes, and radicals of many of the terms legitimately compounded, especially from the Greek, may be found useful.\*

\* When the author wrote the following glossary, he was not aware that the plan had suggested itself to any other individual. After it was written, he saw ‘A Dictionary of Terms used in Medicine, &c.’ by Richard D. Hoblyn, published in London, in the year 1836, which shows, that the same idea had occurred to him. The two glossaries, however, are identical in idea only.

## A.

A: before a consonant; *An* before a vowel, has—in the compound medical terms—a privative or debasing signification, like that of the particles *in*, *im*, *un*, *ir*, in English. Thus, *Sthenīa* (σθενος) means strength; *Asthenia*; want of strength, debility. *Acephalous* (κεφαλη, 'head;') devoid of head. *Anencephalous* (εγκεφαλον, 'the brain;') a fœtus with an imperfect brain. *Acardia* (καρδια, 'heart;') devoid of heart. *Anæmia* (αἷμα, 'blood') want of blood. Occasionally in compound words, they have an intensive meaning.

ACROS, 'elevated; at the top,' (ακρος;) as *Acrocheir* (χειρ, 'the hand,') the extremity of the hand or fingers. *Acrodynia* (οδυνη, 'pain') pain in the extremities. *Acrōmion* (ωμος, 'the shoulder,') the top of the shoulder.

ADEN (αδην) 'a gland;' hence, *Adenalgia* (αλγος, 'pain') glandular pain. *Adenemphraxis* (εμφραξις, 'obstruction') glandular obstruction. *Adenitis*, (see IRIS) glandular inflammation. *Adenology*, (λογος, 'description,') a treatise on the glands. *Adenomeningea*, (μηνιγξ, 'a membrane') mucous fever, because seated in the glands or follicles of the mucous membrane of the stomach and bowels. *Adenoncus* (ογκος, 'a tumor,') a swelling of the glands.

ÆDŒA (αιδοια) 'the parts of generation.' Hence, *Ædœitis*, inflammation of the genital organs; *Ædœodynia* (see ODYNE) 'pain in the genital organs;' and *Ædœopsophia* (ψοφεω, 'I emit a noise') a discharge of air from the parts of generation.

ÆMA, see HÆMA.

ÆRĒSIS, (αιρεσις) 'the removal of any thing.' A suffix denoting 'a removal or separation,' as *aphærēsis* (απο, 'from,') the removal of any part. *Diærēsis* (δια, 'through') a breach of continuity.



*ÆSTHĒMA* (αἰσθημα, genitive αἰσθηματος,) 'a sensation,' 'a perception.' Hence, *Æsthematonūsi* (νοσοι, 'diseases.') and *Æsthetica*, 'diseases affecting sensation;' *Æsthemat-organonūsi*, 'diseases of the organs of sensation.'

*AGOGUE*, (αγωγος, 'a leader') from αγω, 'I lead or expel.' Hence, *cholagogue* (χολη, 'bile') an expeller of bile. *Hydragogue* (ὑδωρ, 'water') a medicine, which causes watery evacuations.

*AGRA* (αγρα, from αγρεω, 'I seize,' 'I lay hold of,') 'a seizure:' as *odontāgra*, (οδους—genitive οδοντος, 'a tooth,') toothache; *Chirāgra* (χειρ, 'the hand') gout in the hand; *Podāgra* (πους, 'the foot,') gout in the foot.

*AGRYPNUS* (αγρυπνος) 'sleepless,' 'vigilant.' *Agrypnocōma* (κωμα, 'stupor,') 'sleeplessness, with great inclination to sleep.' *Agrypnōdes* (febris, πυρετος) (ειδος, 'resemblance,') 'fever attended with watching.'

*AIMA*. See *HÆMA*.

*ALGOS* (αλγος) 'pain,' also *Algēma* (αλγημα,) and *Algēsis* (αλγησις) with the same signification. *Algeticus* (αλγητικος,) painful:—as *epilepsia algetica*, 'epilepsy caused by pain,' &c. &c. The suffix *algia* has the same signification,—as in '*Cephalalgia* (κεφαλη, 'the head') headache; *Pleuralgia* (πλευρον, 'the side') a pain in the side; *Neuralgia* (νευρον, 'a nerve') nerveache, &c.

*ALLAS* (αλλας) 'a sausage.' Hence, *Allantōdes* or *Allantōides* (ειδος, 'shape') sausage-shaped, the Allantois; *Allantotoxicum* (τοξικον, 'a poison') sausage poison.

*ALLOS* (αλλος) 'another,' 'different'—as *Allopathīa* (παθος, 'disease') the opposite to homœopathy,—the ordinary doctrine of medical practice: *Allotriophagia* (αλλοτριος, 'foreign,' and φαγεω, 'I eat') a morbid appetite for substances, that are not alimentary.

*AMAUROS* (αμαυρος, 'obscure.') Hence, *Amaurosis*, obscurity or loss of sight.



AMBLUS (αμβλυσ) ‘obscure.’ Hence, *Amblyopia* (οψις, ‘vision’) feebleness of vision.

AMNOS (αμνος,) ‘a sheep.’ Hence, *Amnion* (αμνιον, άμνειον) the innermost of the fœtal membranes;—because first observed in the sheep (?). *Amniocleptis*, (κλεπτω, ‘I steal or take away unobserved’) the too early discharge of the liquor amnii: *Amnītis* or *Amniītis*, inflammation of the amnion, &c.

AMPHI (αμφι) ‘both, around, on all sides.’ *Amphiarthrōsis* (αρθρον, ‘a joint’) a mixed articulation, where there is an intermediate body between the bones, as in the joints of the vertebral column. *Amphiblestrōdes tunica* (αμφιβληστρον, ‘a net’) the retina. *Amphibranchia* (βραγχια, ‘the gills’) the tonsils and surrounding parts. *Amphidexios* (δεξιός, ‘dexter, right,’) ‘ambidexter;’ one who uses both hands, with equal facility.

ANA (ανα) ‘in,’ ‘through,’ ‘upwards,’ ‘above,’—in opposition to CATA (q. v.;) also, ‘repetition,’ like the English *re*. *Anabāsis* (βαινω, ‘I go’) the period of increment of a disease. *Anabexis* (βηξ, ‘a cough’) expectoration. *Anacatharsis* (καθαρσις, ‘purging’) purgation upwards, by expectoration or by vomiting. *Anadiplōsis* (διπλωσις, ‘a doubling’.) The reduplication of an intermittent. *Analeptic* (αναληπτικον) ‘restorative.’ A restorative medicine. *Anasarca* (σαρξ, ‘the flesh’) dropsy of the cellular membrane. *Anaspadiaeus* (σπαω, ‘I contract,’) one, whose urethra opens on the upper part of the male organ. *Anastomōsis* (στομα, ‘a mouth,’) inosculation: a communication between two vessels. *Anatomy* (τομη, ‘incision’) dissection. The doctrine of the structure of the organism.

ANCOS (αγκος) ‘a hook,’ ‘an angle.’ Hence, *Ancon*, (αγκων) the bend of the elbow; and *Ancylē* (αγκυλη,) having the same signification as *Ancos* and *Ancon*. *Ancyloblephāron* (βλεφαρον, ‘the eyelid’) growing together of the eyelids. *Ancylosis*, a stiff joint.

ANDRIA (ανδρεια, ανδρεια) manhood, virility. Hence, *Andr-anatomy*, the anatomy of man. *Androgynous* (γυνη, 'a woman') hermaphroditic: *Andromania*, nymphomania.

ANGOS (αγγος) 'a vessel,' and *Angion* or *Angeion* (αγγειον, 'a small vessel.' Hence, *Angioleucitis* (λευκος, 'white,' and *itis*, denoting inflammation. Inflammation of the white vessels, or lymphatics. *Angiology* (λογος, 'a discourse') a treatise on the vessels. *Angiopathia* (παθος, 'disease') a disease of the vessels. *Angiosteōsis* (οσσειον, 'a bone') ossification of the vessels. *Angiotomy* (τομη, 'incision') dissection of the vessels.

ANO (ανω) 'above,' 'up;' as *Anochilon* (χειλος, 'the lip') having a large upper lip.

ANTI (αντι,) in composition, generally means opposition; as *Antalgic* (see ALGOS,) an anodyne. *Antarthritic* (see ARTHRON) a gout remedy. *Anthelix* (ελιξ, 'the helix of the ear') an eminence in front of the helix of the ear: *Anthelmintic* (ελμινς, 'a worm') a vermifuge. *Antipharmāca* (φαρμακον, 'a poison') an *Antidote*, (δοω, 'I give.')

ANTIADDES (αντιαδες) 'the tonsils.' Hence, *Antiaditis*, inflammation of the tonsils. *Antiadoncus* (ογκος, 'a tumour') swelling of the tonsils.

ANTHRŌPOS (ανθρωπος) 'man.' Hence, *Anthropography* (γραφη, 'a description') the Natural History of Man: as well as *Anthropology* (λογος, 'a discourse.') *Anthrophagūs* (φαγω, 'I eat') a man-eater. *Anthropotomy* (τομη, 'incision') the anatomy of man.

APHĒ, see HAPHE.

APO (απο) 'from, of, off,' as *Apogalactismus* (γαλα, 'milk') weaning. *Aponeurōsis* (νευρον, 'a nerve') formerly considered to mean nervous,—a tendinous expansion, or covering to a muscle. *Apophysis* (φνω, 'I rise out') a process. *Apoplexy* (πλησσω, future πληξω, 'I strike.')

ARACHNĒ (αράχνη) 'a spider, a spider's web.' *Arachnōdes* or *arachnoïdes* (εἶδος, 'resemblance') like unto a spider's web; as the tunica *arachnoides* of the brain. *Arachnoïdītis*, *Arachnītis* (see *ITIS*) inflammation of the arachnoid.

ARCHOS (αρχος) 'the fundament, the breech.' *Archosyrinx* (συνεγξί, 'a pipe or fistula') fistula in ano. *Archoptōma* and *archoptōsis* (πτῶμα, and πτώσις, 'a falling down') prolapsus ani.

ARTHRON (αρθρον) 'a joint.' Hence, *Arthralgia* (see *algia*) pain in the joints. *Arthritīs*, and *Arthrōsia* (Good,) inflammation of the joints: gout. *Arthrodynia* (ὀδυνή, 'pain') joint-ache.

ARYTÆNA (αρνταίνα) 'a ladle.' Hence, *Arytænōdes*, *Arytenoïdes* (εἶδος, 'resemblance') *Arytenoid*: as the arytenoid cartilages.

ATĒLES (ατελής) 'imperfect, defective.' As *atelocardia* (καρδία, 'heart') a fœtus with an imperfect heart. *Atelencephalia* (εγκεφαλον, 'brain') the state of a fœtus with an imperfect brain.

ATHER (αθηρ) 'an ear of corn.' Hence, *Athēra*, *Athērē* (αθηρα, αθηρη) a pap made of meal: *Atherōdes* (εἶδος) pap-like: and *Atherōma*, a tumour containing a pap-like substance.

ATLAS (Ατλας) the first vertebra; so called from its supporting the head, as Atlas did the globe. Called, also, *Atloid* (εἶδος, 'resemblance.') Atlas-like.

AUTOS (αυτος,) in composition, 'self,' 'the same.' Hence, *Authēmerus* (ἡμέρα, 'a day') happening on the same day. *Autocheiria* (χειρ, 'hand') self-murder. *Autopsy* (οψίς, 'inspection') self-inspection: improperly used for post mortem inspection. *Autocratia* (κρατος, 'strength') the vis medicatrix naturæ.

AXON (αξων) '*Axis*, an axletree,' the second vertebra of the neck; also called *Axoid* (ειδος) 'form.'

## B.

BALANUS (βαλανος) 'a glans or acorn'—The glans penis. *Balanoblennorrhœa* (see BLENNNA) *Blennorrhœa* of the glans. *Balanitis*, inflammation of the glans.

BARYS (βαρυς) 'heavy, difficult.' Hence *Baryecoia* (ακοη, —in composition, ηκοια, 'hearing;') hardness of hearing. *Baryodŷnē* (οδυνη, 'pain') a dull, constant pain.

BDELLA (βδελλα) 'a leech.' Hence, *Bdellomēter* (μετρον, 'a measure.') An instrument proposed as a substitute for the leech.

BI, see DI.

BIOS (βιος) 'life.' Hence *Biodynamics*, (δυναμις, 'power.') The doctrine of the vital forces. *Biology*, (λογος, 'a description') the doctrine of life.

BLECHROS (βληχρος) 'weak,' feeble. Hence, *Blechropyra* (πυρ, 'fire.') A slight fever. *Blechrosphygmia* (σφυγμος, 'the pulse.') A weak pulse.

BLENNNA (βλεννα,) 'mucus.' *Blennoptŷsis* (πτυνω, 'I spit') an expectoration of mucus. *Blennopyra* (πυρ, 'fire.') A mucous fever. *Blennorrhagia* (ραγη, 'a breaking forth.') *Gonorrhœa*, also *Blennorrhœa*, (ρεω, 'I flow.')

BLEPHARON (βλεφαρον) 'the eyelid.' Hence, *Blepharitis*. Inflammation of the eyelid. *Blepharoblennorrhœa*, a mucous discharge from the eyelids. *Gonorrhœal ophthalmia*. *Blepharœdēma* (οιδημα, 'a watery swelling.') *Œdema* of the eyelids. *Blepharophthalmia*, inflammation of the eyelids. *Blepharoplasty* (πλαστικός, 'forming.') The formation of a new eyelid. *Blepharoplēgia* (πληγη, 'a stroke') paralysis of the eyelids; as well as, *Blepharoptōsis* (πτωσις, 'a falling down.')

**BOTHRIUM** (Βοθρίον) ‘a small hole.’ Whence, *Bothriocephalus* (κεφαλή, ‘the head.’) A species of tape-worm.

**BRACHYS** (Βραχυς,) ‘short.’ Whence, *Brachypnœa*, (πνοή, ‘breath.’) Shortness of breath.

**BRADYS** (Βραδύς) ‘difficult.’ Hence, *Bradycœia* (ἡκοία, ‘hearing.’) Difficulty of hearing. *Bradymasēsis* (μασησίς, ‘mastication,’) difficulty of mastication. *Bradypepsia*, (πεψίς, ‘coction,’) tardiness of digestion.

**BROMA** (Βρωμα, genitive Βρωματος,) ‘food.’ Hence, *Bromatography* (γραφη, ‘a description.’) A description of aliments: and *Bromatology* (λογία, ‘a description.’) The doctrine of aliments.

**N. B. BROMINE** is not from this radical, but from Βρωμος, ‘a stench,’ or ‘smell,’ especially the smell of the male goat.

**BRONCHUS** (Βρογχος) ‘the windpipe.’ *Bronchia*, (Βρογchia) the ramifications of the windpipe. *Bronchitis*, inflammation of the bronchia. *Bronchocēlē* (κηλη, ‘a swelling,’ ‘hernia,’) the goitre. *Bronchotomy* (τομή, ‘incision.’) The operation of opening the windpipe.

**BU** (Βου, abbreviation of Βους, ‘an ox,’) in composition, expresses ‘excess,’ ‘greatness.’ Hence, *Bulimus* (λιμος, ‘hunger,’) ox-appetite; voracious appetite. *Buphthalmus* (οφθαλμος, ‘eye.’) Ox-eye. Dropsy in the eye.

**BUBO** (Βουβων) ‘the groin;’ the inguinal glands. Hence, *Bubonalgia*, (see **ALGOS**.) Pain in the groin. *Bubonocēlē* (κηλη, ‘rupture.’) Inguinal hernia.

## C.

**CACOS** (κακος) in composition, ‘badness,’ ‘faultiness,’ ‘deficiency.’ *Cachexia* (ἔξις, ‘habit,’) a bad habit of body. *Cacochymia* (χυμος, ‘juice.’) A bad condition of the humours. *Cacoēthes* (ἥθος, ‘disposition,’ ‘habit.’) Of a bad or vitiated character.

CARCINOS (καρκινος) 'a crab.' Hence *Carcinōdes*, *Carcinoides* (ειδος, 'resemblance,') crab-like, cancer-like,—as *ulcera carcinodea*.

CARCINOMA (νομη, 'an eating ulcer,' a cancerous ulcer or tumour.

CARDIA (καρδια) the heart. Also, the upper orifice of the stomach. Hence, *Cardiaca*, cordials. *Cardialgia* (αλγος, 'pain,') Pain in the stomach. Heartburn. *Cardiopalmus* (παλμος, 'palpitation,') palpitation of the heart. *Cardiorrhesis* (ρηξις, 'rupture,') Rupture of the heart. *Carditis*, inflammation of the heart.

CARA (καρα) 'the head;' and CAROS (καρος) 'stupor.' Hence *Carōsis*, stupefaction. *Caroticus* (καρωτικός) any thing that causes stupor. *Carotid*, the artery of the head.

CARPHUS (καρφος) any light flocculent substance; also, dried straw. Hence, *Carphologia* (λεγω, 'I collect,' 'I pluck,') Picking the bed clothes, as if to gather flocculi.

CATA (κατα) 'downwards,' 'after,' applied to time. Hence, *Catalepsy* (ληψις, 'a seizing hold of,' 'an attack,') *Catamēnia*, (μην, 'a month,') The menses. *Catarrhus* (ρεω, 'I flow,') a catarrh. *Catharsis*, (αιρω, 'I take away,') Purgation. *Cathēmerinus* (ἡμερα, 'a day,') daily: καθ' ἡμεραν, *per diem*. *Cathēter* (ιημι, 'to send,') An instrument for drawing off the urine.

CATO (κατω) 'beneath.' Hence *Catochilon* (χειλων, 'the lip,') The under lip.

CAUMA (καυμα) 'a burnt part.' This and the following are from καιω, 'I burn.' *Causus* (καυσος) 'a burning fever.' *Causōdes* (ειδος, 'resemblance,') 'burning,' as *Febris causodes*,—the same as *Causus*. *Caustic*, a burning or corrosive agent. *Cautery* (καυτηριον) a burning agent.

CĒLE (κηλη) 'a tumour,' 'a rupture.' A very common suffix; as *Bubonocēlē* (see BUBON.) *Hydrocēlē*, (see HYDOR.) *Celotomia* (τομη, 'incision,') an operation for rupture.



CENOS (κενος) ‘empty;’ as *Ceneangīa* (κενεαγγειη,) (αγγειον, ‘a vessel.’) Emptiness of vessels. *Cenōsis* (κενωσις,) Evacuation. Inanition.

CEPHALĒ (κεφαλη) ‘the head.’ Hence, *Cephalæa* (κεφαλαια) violent headache. *Cephalăgra*, (see AGRA.) Gout in the head. *Cephalalgia* (κεφαλαλγια,) (see ALGIA.) Headache. *Cephalītis*. Inflammation of the interior of the head: and *Encephalītis*. *Cephalotomia* (τομη, ‘incision,’) opening the head—as of the fœtus.

CERAS (κερας, genitive κερατος,) ‘Horn;’ also, the ‘Cornea.’ *Ceratectomia* (εκτομος, ‘cut out.’) An incision through the cornea. *Ceratītis*. Inflammation of the cornea. *Ceratocēlē*, (see CELE.) A protrusion of the cornea. *Hernia Corneæ*. *Ceratomyxis* (νυξις, ‘a puncture.’) Puncture of the cornea in the operation of couching. *Ceratotōmus* (τομη, ‘incision.’) An instrument for puncturing the cornea, in the operation for cataract.

N. B. *Cerato*—in composition, in the names of muscles—is used for the cornu of the os hyoides:—as *cerato-pharyngeus*,—*Cerato-glossus*, &c.

CERCOS (κερκος) ‘a tail.’ Hence, *Cercōsis*, (κερκωσις) a preternatural elongation of the clitoris.

CEROS (κηρος) ‘wax.’ *Cerōdes* (ειδος, ‘resemblance.’) Wax-like. *Cerōma* (κηρωμα) cerate. Also, a tumour, with wax-like contents.

CHALINOS (χαλινος) ‘frænum, a bridle.’ *Chalinoplasty*, (πλαστικος, ‘forming.’) The formation of a new frænum.

CHEILOS (χειλος) ‘a lip.’ Hence, *Cheilon* or *Chilon*, (χειλων) one having a thick lip. *Cheiloneus* or *Chiloncus*, (ογκος, ‘a tumour,’) a swelling of the lip. *Cheilītis* or *Chilītis*. Inflammation of the lip. *Cheiloplasty* (πλαστικος, ‘forming.’) The formation of a new lip.

CHIR or CHEIR (χειρ) ‘the hand.’ Hence, *Chirăgra* (see



AGRA) gout in the hand: *chiriatriā* (ιατρειᾶ, 'healing') and *chirurgia* (χειρουργία, (εργον, 'work') surgery.

CHLOROS (χλωρος, 'green.') Hence *chlora*, *chlorine*,—because, a greenish gas. *Chlorōsis*, the green sickness.

CHOLĒ (χολή) 'bile;' also *Cholos* (χολος.) Hence, *Cholagogue* (αγω, 'I expel') a bile expeller. *Cholecystis* (κυστις, 'a bladder') the gall-bladder. *Choledōchus* (δεχομαι, 'to receive') as the choledoch duct, which receives and conveys the bile into the intestines. *Cholelithos* (λιθος, 'a stone') a gallstone. *Cholēra* (χολέρα) and *Cholera morbus*. *Cholesterine* (στέαρ, 'suet') the crystalline part of certain biliary calculi. *Cholōses*. Biliary diseases.

CHOLOS (χωλος) 'lame.' Hence, *Cholōsis* and *Cholansis*, laming and lameness; Paralysis.

CHONDROS (χονδρος,) 'a cartilage.' Hence, *Chondrography* (γραφη, 'a description') a description of the cartilages; and *Chondrology* (λογος, 'a discourse.')

CHORIŌN (χοριον) 'skin,' 'leather,' the skin; *Corium* especially the true skin: also, the external membrane of the ovum. *Chorioid* or *Choroid* (ειδος, 'resemblance,') leather-like, or skin-like. One of the coats of the eye.

CHORUS (χορος) 'a dance,'—especially in a circle. Hence, *Chorēa* (χορεία) 'St. Vitus's dance:' and *Choromania*; having the same signification.

CHROMA (χρωμα) 'colour;' as *Achromatopsia* (α, privative, and οψις, sight) impracticability of discriminating colours.

CHYLUS (χυλος) 'juice,' 'moisture.' Chyle. Hence, *Chylopoietic* (ποιεω, 'I make') chyle-making. *Chylōsis* (χυλωσις) 'the formation of chyle.' *Chylification*.

CHYMUS (χυμος) 'a sap or juice,' chyme. Hence, *Chymistry* [?]. *Chymōsis* (χυμωσις) 'the formation of chyme.' *Chymification*.

CINEO (κινεω) 'I move.' Hence, *Cinēma* (κινημα) and

*Cinēsis* (κίνησις) ‘motion.’ *Cinonōsi* (νοσος, ‘disease’) diseases of motion. *Cinoplanēsis* (πλανησις, ‘a wandering about.’) Irregularity of voluntary motion.

*CIONIS* (χιονις) ‘the uvula.’ Hence *Cionītis*, inflammation of the uvula.

*CIRRHOS* (κίρρος) ‘yellow.’ Hence, *Cirrhōsis*. Yellow degeneration of the liver or lungs.

*CIRSOS* (κίρσος) ‘a varix.’ Hence, *Cirsocēlē* (κηλη, ‘a tumour’) a varicose state of the spermatic veins. *Cirsotomy* (τομή, ‘incision’) the operation for the removal of varices.

*CLEIS* (κλεις, genitive κλειδος, ‘a key:’) *Clavis*; also, the Clavicle. Hence, *Cleidāgra* (see AGRA.) Gout in the clavicle; also, *Cleisāgra*.

*CLIMAX* (κλιμαξ) ‘a stair.’ Hence, *Climacter* (κλιμακτηρ) a step; a climacter; every seventh year, or period of life, which has been esteemed critical;—Anni *Climacterīci*.

*CLINE* (κλινη) ‘a bed.’ Hence, *Clinical* (κλινικός.) *Clinoid* (κλινοειδης) (ειδος, ‘shape’) bed-shaped, as the *Clinoid* processes.

*COCCYX* (κοκκυξ) ‘the cuckoo.’ The Os *coccygis*, or rump-bone. Hence, also, *Coccygeus*, a muscle appertaining to the rump-bone. *Coccycephalous* (κεφαλη, ‘the head.’) A fœtus having the head shaped like the coccyx.

*CÆLIA* (κοιλία) ‘a hollow place,’ the belly. Hence, *Cælialgia* (αλγος, ‘pain’) bellyache; and *Cæliorrhœa* (ρεω, ‘I flow’) diarrhœa. *Cæliaca*; diseases of the digestive function. [GOOD.] *Cæliopyōsis* (πυον, ‘pus.’) Abscess of the abdomen.

*CÆNOS* (κοινος) ‘common.’ Hence, *Cæna*, supper; the common evening meal: and *Cænæsthēsis* (αισθησις, ‘feeling’) common feeling.

*COLEOS* (κολεος) ‘a sheath,’ the vagina. Hence, *Coleītis* and *Coleosītis*. Inflammation of the vagina.

**COLON** (κωλον) from κοίλος, 'hollow.' The largest of the bowels. Hence, *Colīca* (ἡ κοιλία νοσος) the colic; *Colicodynia* (οδυνή, 'pain.') *Colītis*. Inflammation of the colon.

**COLPOS** (κολπος, 'a gulf') the vagina. Hence, *Colpalgia*, (αλγος, 'pain,') pain in the vagina. *Colpītis*, inflammation of the vagina. *Colpoptōsis* (πτωσις, 'prolapsus') prolapsus vaginæ.

**COMA** (κωμα) a 'lethargic sleep.' Hence, *Comatōdes* (κωματωδης) and *Comatose*, drowsy.

**CONDYLUS** (χονδυλος) 'a tuberosity,' 'a knuckle,' a process. Hence, *Condyle*, a knotty elevation. *Condylōdes* and *Condylōides* (ειδος, 'resemblance') condyloid, having the shape of a condyle; and *Condylōma* (χονδυλωμα) a fleshy protuberance, of a knot-shape. *Epicondyle* (επι, 'upon') an eminence on the outer condyle of the os humeri. [CHAUSSIER.]

**COPOS** (κοπος) a feeling of fatigue or weariness in a part. As *Osteocōpus* (οστεον, 'a bone') feeling of weariness or pain in a bone.

**COPROS** (κοπρος) 'excrement.' Hence, *Copracratīa* (ακρατεια, 'want of power') involuntary discharge of the fæces. *Copragogue* (αγω, 'I expel') a cathartic. *Copremēsis* (εμεσις, 'vomiting') stercoraceous vomiting. *Coprorrhœa* (ρεω, 'I flow') diarrhœa. *Coprosclerōsis*, and *Coprosclerōma* (σκληρεος, 'dry,' 'hard') hardness of the fæces. *Coprostasia* and *coprostāsis* (στασις, 'stagnation') constipation.

**CORAX** (κοραξ) 'a raven.' Hence, *Coracōdes* and *Coracōides* (ειδος, 'form') having the form of a raven, or of a raven's beak; as the coracoid process of the scapula.

**CORE** (κορη) 'the pupil.' Hence, *Corectomia* (εκτομή, 'excision') the formation of an artificial pupil.

**COTYLA** and **COTYLĒ** (κοτυλη) 'a hollow,' 'a deep hollow.' Hence, *Cotylēdon* (κοτυληδων) the acetabulum; a lobe of the

placenta, &c. *Cotyloides*, *Cotyloïdes* (εἶδος, 'form') Cotyloid; as the cotyloid cavity.

COXA, 'the hip,' the hip-joint. Hence, *Coxăgra* (αγχα, 'seizure') gout in the hip. *Coxalgia* (αλγος, 'pain,') pain in the hip. *Coxitis*. Inflammation of the hip.

CRANION (κερανιον) 'the skull.' Hence *Craniology* (λογος, 'a description,') Phrenology. *Craniometry* (μετρον, 'a measure') measurement of the skull. *Cranioscopy* (σκοπεω, 'I inspect') inspection or examination of the skull. *Hemicrania* (ἡμι, 'one half') a pain in half the head. *Olecranon* (ωλενη, 'the ulna') the head of the ulna.

CRICOS (κρικος) 'a ring.' Hence, *Cricodes*, *Cricoïdes* (κρικωδης, κρικοειδης) ring-shaped (εἶδος, 'shape,') as the cricoid cartilage.

CROCIS and CROCYS (κροκίς and κροκυσ) 'the nap on cloth.' Hence, *Crocidismus*, the like signification as *Carphologia*.

CRYPTOS (κρυπτος) 'concealed.' Hence, *Crypsorchis* or *Cryptorchis* (ορχίς, 'a testicle') one, whose testes have not descended. *Cryptocephalous* (κεφαλη, 'the head') a fœtus with the head not visible externally.

CYANEUS (κυανεος, κυανος, 'blue.') Hence, *Cyanogene* (γενναω, 'I engender') 'a generator of blue.' The basis of the Hydrocyanic acid. (Germ. *Blaustoff*.) *Cyanopathia* (παθος, 'disease,') and *Cyanosis*, the blue disease.

CYO (κυω,) 'I conceive,' 'I am pregnant.' Hence, *Cyēma*, (κυημα) the embryo; and *Cyēsis* and *Cyophōria* (φερω, 'I carry,') pregnancy.

CYON (κυων) 'a dog.' Hence, *Cynanchē* (αγχω, 'I choke') sore-throat; properly, *Synanche* (?). *Cynicus*, and *Cynodes* (εἶδος, 'form,') *Cynic*, as 'Cynic spasm.' *Cynolyssa* (λυσσα, 'madness,') *Rabies canina*. *Cynorexia* (ορεξις, 'appetite,') *Fames canina*.

CYSTIS (κυστις) 'a bladder,' especially the urinary blad-

der. Hence, *Cystalgia* (αλγος, 'pain.') Pain in the bladder. *Cystitis*, inflammation of the bladder. *Cystotomy*, (τομη, 'incision.') Lithotomy. *Cystencephalous* (εγκεφαλον, 'brain.') A fœtus having a vesicular brain.

**CYTOS** (χυτος) 'the skin.' Hence, *Cytitis*. Inflammation of the skin. See **SCYTOS**.

## D.

**DACRY, DACRYON**, (δακρυ, δακρυον,) 'a tear.' Hence, *Dacryadenitis* (αδην, 'a gland.') Inflammation of the lachrymal gland. *Dacryocystitis* (χυστις, 'a bladder.') Inflammation of the lachrymal sac. *Dacryosyrinx* (συριγξ, 'a fistula.') *Fistula lachrymalis*.

**DACTYLUS** (δακτυλος) 'a finger.' Hence, *Dactylitis*. Paronychia or whitlow. *Dodedactylitis* (δωδεκα, 'twelve.') Inflammation of the duodenum.

**DELTA** (δελτα) the Greek letter Δ. Hence, *Deltoid* (ειδος, 'form,') resembling the letter Δ, as the deltoid muscle.

**DEMOS** (δημος, 'the people.') Hence, *Endemic* (εν, 'in.') A disease peculiar to a people or country. *Epidemic* (επι, 'upon.') An atmospheric disease.

**DERĒ** (δεξη) 'the neck.' Hence, *Derencephalous* (εγκεφαλον, 'the brain.') A fœtus, having the head and brain in the neck.

**DESMA, DESMĒ, DESMOS** (δεσμα, δεσμη, δεσμος, 'a band or bond.') A ligament. Hence, *Desmography* (γραφη, 'a description.') A description of the ligaments.

**DI**, (δι, δις) 'bis, twice, double.' Hence, *Dicrōtus* (κροτειω, 'I strike,') beating double; as *Pulsus dicrotus*. *Digastricus* (γαστηρ, 'the belly,') double-bellied. *Diploē* (πλεω, 'I plait or fold.') The cellular structure between the tables of the skull. *Diplopia* (διπλοος, 'double,' and οψις, 'vision.') Double vision.

**DIA** (δια) in composition, ‘through,’ ‘asunder,’ ‘out of,’ ‘separated.’ Hence, *Diabētes* (βαινω, ‘I go.’) A morbid discharge of urine. *Diachylon* (χυλος, ‘a juice.’) A plaster formerly made of vegetable juices. *Diacodium* (διακωδιων,) (πωδειον, ‘a poppy head,’) a medicine made of poppy heads. *Diagnōsis* (γνωσις, ‘learning.’) Discrimination. *Diapedēsis* (πηδαω, ‘I spring.’) Transudation; as hemorrhage by diapedesis. *Diaphorēsis* (διαφορησίς,) (φογεω, ‘I convey.’) Perspiration. *Diaphragm* (φραγμα, ‘an enclosure,’) a partition. *Diarrhœa* (ξεω, ‘I flow.’) *Diastolē* (διαστελλω, ‘I put asunder.’) Dilatation. *Diathēsis* (τιθημι, ‘to place.’) Disposition to disease. *Diurēsis* (ουρεω, ‘I pass the urine.’) An abundant secretion of urine.

**DIPHTHĒRA** (διφθερα) ‘a skin;’ ‘leather.’ Hence, *Diphtheritis*. Inflammation of a mucous membrane, accompanied by a membraniform exudation.

**DIPSA** (διψα) ‘thirst.’ Hence, *Dipsōsis*. Morbid thirst. *Polydipsia* (πολυς, ‘much.’) Excessive thirst.

**DOTHIEN** (δοθην) ‘a boil,’ ‘a pustule.’ Hence, *Dothi-enteritis* (*Enteritis*. Inflammation of the intestines.) Follicular gastroenteritis.

**DYNĀMIS** (δυναμις, ‘strength.’) The vital power. Hence, *Dynamomēter* (μετρον, ‘a measure.’) A measurer of strength.

**DYS** (δυσ) in composition, ‘difficult,’ ‘faulty;’ sometimes privative: mostly, answering to the English particles *dis*, *in*, *mis*, or *un*. Hence, *Dysæsthesiæ* (αισθησις, ‘sensation.’) Dulness of sensation, or diseases of sensation. *Dyscrasia* (κρασις, ‘a mixture.’) A faulty mixture of the juices, a cachectic condition. *Dysecoia* (ακοη) ‘hearing.’ Difficulty of hearing. *Dysentery* (εντερων, ‘an intestine.’) The bloody flux. *Dysmenorrhœa*, see (**MEN**) painful and difficult menstruation. *Dysopia* (οψις, ‘vision.’) Defective



vision. *Dyspepsia* (πεψις, 'digestion.') Indigestion. *Dysphagia* (φαγω, 'I eat.') Difficulty in swallowing. *Dyspnœa* (πνοη, 'breathing.') Difficulty of breathing. *Dystöcia* (τοκος, 'parturition.') Difficult labour; and *Dysüria* (ουρεω, 'I pass the urine.') Difficulty in passing the urine.

## E.

*Ec*,—before a vowel, *Ex* (εξ, εξ) 'out of,' 'from,' 'off.' Hence, *Ecchyniöma* (χευω, 'I pour out.') An extravasation of blood. *Eccoprotic* (κοπρος, 'excrement.') A cathartic. *Eclampsia* (λαμψις, 'an emission of light.') A convulsion. *Epilepsy*: from a sensation of light being an occasional premonitory symptom. *Eclectic* (λεγω, 'I choose.') As an *eclectic* physician; *eclectic* medicine. *Eclegma* (εχλειγμα) (λειχω, 'I lick.') An electuary. *Ectröpium* (τρεπω, 'I turn.') A turning out,—as of the eyelids. *Eczëma* (ζεω, 'I boil.') A hot eruption. *Exæmia* (αίμα, 'blood.') Want of blood. *Exanthëma* (ανθος, 'a flower.') An efflorescence. *Exomphälos* (ομφαλος, 'the navel.') Rupture of the navel. *Exophthalmus* (εμφθαλμος, 'the eye.') Projection of the eye out of the orbit. *Exostösis* (οστεον, 'a bone.') A bony tumour. *Exosmose* (ωσμος, 'impulsion.') Outward impulsion. (DUTROCHET.)

*EIDOS* (ειδος, 'form,' 'resemblance.') The *ει* is often changed into *ω*, at the termination of words. Thus *Hæmatoïdes* (αιματοειδης) is often written *Hæmatödes* (αιματωδης.) the English termination *oid* is from *ειδος*; as *Hæmatoid*, *Phlegmonoid*, &c.

*ELYTRON* (ελντρον) 'a sheath.' The vagina. Hence, *Elytritis*. Inflammation of the vagina. *Leucorrhœa*. *Elytrödes* (ειδος, 'form.') Sheath-like;—as the *tunica vaginalis*, vel *elytrodes*, *testis*. *Elytroptosis* (πτωσις, 'a falling down.') A prolapsus of the vagina.



EN and EM (εν) ‘in,’ ‘into,’ ‘within;’ also, ‘excess;’ (frequently used in this last sense, by Dr. Good.) A common prefix, answering, generally, to the prefixes *in* and *in*, in English. In composition, before β, π, φ, ψ, and μ, the ν is changed into μ; before γ, κ, ξ, and χ, into γ; before λ, into λ; and before ς, generally, into ς. Hence, EMBRYO (εμβρυον) (βρυω, ‘I bud forth.’) A fecundated germ. Embryothlāsis (θλασις, ‘a breaking to pieces.’) The destruction of the fœtus in utero. Embryotomy (τομη, ‘incision.’) The anatomy of the embryo; destruction of the fœtus. Embryulcia (ελκω, ‘I draw.’) The forcible removal of the fœtus from the uterus. Emmēnia (μην, ‘a month.’) The menses; and Emmenagogue (αγω, ‘I expel.’) A promoter of the menses. Emphysēma (φυσμα or φυσσεις, ‘inflammation.’) (Infiltration with air.) Empiric (πειρα, ‘experience.’) One who makes experiments; also, a quack. Emplastrum (πλασσω, ‘I smear.’) A plaster. Empresma (πρησμα, ‘a burn,’ from πρηθω, ‘I set on fire.’) An internal inflammation. [Good.] Empyēma (εμπυημα, πυσις, ‘suppuration.’) Internal suppuration, especially in the chest. Emprosthotonus (προσθεν, ‘before,’ and τεινω, ‘I extend.’) Tetanus, in which the body is bent forwards. Enarthrōsis (αρθρον, ‘a joint.’) A deep, yet perfect and free joint. Encephalītis (κεφαλη, ‘head.’) Inflammation of the brain. Encephalocēlē (κεφαλη, ‘head,’ and κηλη, ‘rupture.’) Hernia Cerebri. Encephālon or Encephālos (εγκεφαλος, ‘the brain,’) ‘the contents of the cranium.’ Endemic (δημος, ‘the people.’) A disease of a locality. Endon (‘within.’) Hence, Endomose (ωσμος, ‘impulsion.’) Inward impulsion. [DUTROCHET.] Endocardium (καρδια, ‘the heart.’) The lining membrane of the heart. Enēma (ενεμα,) (ιμι, ‘to send.’) An injection. Engastrimythos (εγγαστρυμθος,) (γαστηρ, ‘the belly;’ μυθος, ‘a discourse.’) A ventriloquist. Enteron

(*εντερον*) (*εντος*, 'within') an intestine. Hence, *Enteritis*. Inflammation of the intestine. *Enterocēlē* (*κηλη*, 'rupture') intestinal rupture. *Enterica* (*εντερικα*) diseases affecting the intestines; *Enterolithos* (*λιθος*, 'a stone') a stony concretion in the stomach or intestines. *Dothinenteritis* (*δοθιην*, 'a pustule.') Inflammation of the intestinal follicles. *Entozōon* (*εν*, *εντος*, 'within;' *ζωον*, 'an animal.') An intestinal worm. *Entrōpium* (*τερεπω*, 'I turn.') A turning in, as of the eye-lashes. *Enurēsis* (*ουρεω*, 'I make water.') Incontinence of urine. *Errhine* (*ριν*, 'the nose.') A sternutatory.

*EP'*, *EPH*, *EPI* (*επ'*, *εφ*, *επι*) 'upon,' 'above;' in composition it generally means augmentation, addition, increase, reciprocal action, repetition. Hence, *Epacmē* (*ακμη*, 'the top') increase of a disease, one that is approaching its height. *Ephēbia* (*ήβη*, 'the pubes or down on the parts of generation') puberty; and *Ephēbus*, a young woman. *Ephelides* (*ήλιος*, 'the sun') sun freckles. *Ephēmerus* (*ήμερα*, 'a day') of one day's duration. *Ephialtes* (*αλλομαι*, 'to jump') nightmare. *Ephidrōsis* (*ιδρωσις*, 'sweating') a profuse sweating. *Ephippium* (*ιππος*, 'a horse') the sella turcica. *Epidemic* (*δημος*, 'the people') an atmospheric disease. *Epidermis* (*δερμα*, 'the skin') the cuticle. *Epididymis* (*ιδιδνμος*, 'the testis') a small body, that lies on the testicle. *Epigastrium* (*γαστηρ*, 'the stomach') the region of the stomach. *Epiglottis* (*γλωττα*, 'the tongue.') *Epilepsy* (*λαβανω*—future, *ληψω*—'I seize hold of') the falling sickness. *Epiphysis* (*φνω*, 'I grow') a process, united to the bone by cartilage. *Epiploon* (*επιπλοον*,) (*πλεω*, 'I float.') The omentum or caul. Hence *Epiplocēlē* (*κηλη*, 'a rupture.') An omental rupture. *Epispadias* (*σπαω*, 'I draw, or contract') one whose urethra opens on the dorsum penis. *Epispastic* (the same etymon) 'a drawing' application, as a

blister. *Epistaxis* (σταξις, 'dropping') frequent dropping. Hemorrhage from the nose. *Epistrōpheus* (στρεφω, 'I turn,') the second vertebra of the neck. *Epithem* (τιθημι, 'to put') a cataplasm. *Epūlis* (ουλον, 'the gum') a gumboil. *Epu-  
lotic* (ουλη, 'cicatrization') a cicatrisant.

*EROS* (ερως, 'love.') Hence, *Erotic*; as *Erotic* mania and *Erotomania*, love madness.

*ERYSOS* (εξυσος) *ERYTHOS* (ερυθρος) and *ERYTHROS* (ερυθρος) 'red,' 'rose-coloured.' Hence, *Erysipēlas*; (πελας, 'near.' (?) St. Anthony's fire. *Erythēma*, redness; and *Ery-  
thrēma*. *Erythrōdes* (ειδος, 'resemblance') as the *tunica  
erythrodes* of the testis.

*ETHMOS* (ηθος, 'a sieve.') Hence, *ethmoid* (ειδος, 're-  
semblance') sieve-like, as the *ethmoid bone*.

*EU* (ευ) 'good,' 'proper,'—when prefixed to words, as *Euæmia* (αἷμα, 'blood') a good condition of the blood. *Eu-  
æsthēsia* (αισθησις, 'feeling') a good state of feeling. *Eu-  
chrœa* (χρῶμα or χροα, 'colour of the surface') a good colour  
of the skin. *Eucrasia* (κρασις, 'mixture.') The opposite  
to *dyscrasia*. *Eupepsia* (πεψις, 'concoction,') good digestion.  
*Euthanasia* (θανατος, 'death') an easy death.

*EXIS*, see *HEXIS*.

## F.

*FACIENT* (*faciens*) 'making,' from *facio*, 'I make.' As *calefacient* (*caleo*, 'I warm;') a medicine that causes warmth. *Rubefacient* (*rubeo*, 'I am red') one that causes redness.

*FUGE* (*fugo*, 'I expel') 'an expeller.' Hence, *febrifuge* (*febris*, 'a fever') a fever expeller. *Vermifuge* (*vermis*, 'a worm') a worm expeller.

## G.

GALA (γαλα, genitive γαλακτος,) 'milk.' Hence, *Galactophorous* (φεξω, 'I carry') lactiferous. *Galactopoietic* (ποιεω, 'I make') milk making, milk favouring. *Galactorrhœa* (γεω, 'to flow') a copious flow of milk.

GAster (γαστηρ,) the stomach; the belly. Hence, *Gastralgia* (αλγος, 'pain') stomach-ache, belly-ache. *Gastricism*, the doctrine which refers most complaints to the stomach. *Gastritis*, inflammation of the stomach. *Gastrocnēmius* (κνημη, 'the leg') the belly or calf of the leg; or rather the parts forming it. *Gastrodŷnia* (οδυνη, 'pain') pain in the stomach. *Gastrotomy* (τομη, 'incision') the operation of opening the belly.

GEN, GENĒSIS (γενεσις) 'generation.' Hence, *Hydrogen* (υδωρ, 'water') a gas, which enters into the formation of water. *Osteogeny* (οσσειον, 'a bone') the formation of bone.

GENĪON (γενειον) 'the chin.' Hence, *Genioglossus* (γλωσση, 'the tongue') a muscle, arising from the chin, and passing to the tongue.

GENYS (γενυς) 'the jaw,' also, the chin. Hence, *Genyantron* (αντρον, 'a cavity') the antrum of Highmore; and *Genyantralgia* (αλγος, 'pain') pain in the antrum of Highmore.

GERON (γερον,) 'an old person.' Hence *Gerocomium* (κομειω, 'I take care of') an invalid hospital. An hospital for the aged.

GEUSIS (γευσις) 'taste.' Hence, *Geusionōsi*, and *Geustionōsi* (νοσος, 'a disease.') Diseases of taste.

GINGLYMUS (γινγλυμος,) 'a hinge.' A hinge joint. Hence, *Ginglymoid* (ειδος, 'form') hinge-like.

GLENE (γληνη,) 'a shallow socket.' Hence, *Glenoid* (ειδος, 'form;') as *glenoid fossa*; a shallow articular surface.

GLOSSA (γλῶσσα) and GLOTTA (γλωττα) 'the tongue.' Hence, *Glossalgia* (αλγος, 'pain,') pain in the tongue. *Glossitis*, inflammation of the tongue. *Glossoplēgia* (πληγη, 'a stroke') paralysis of the tongue.

GNŌSIS (γνῶσις) 'knowledge.' Hence, *Diagnōsis* (δια, 'by') discrimination of diseases. *Prognōsis* (πρῶ, 'before') foreseeing and foretelling the result of disease.

GOMPHIOS (γομφίος) 'a peg, or a nail.' Hence, *Gomphiasis*. Pain in the teeth; especially from the use of acids. Also, looseness of the teeth. *Gomphōsis*, the articulation of the teeth with the jaws.

GONĒ (γονή) GŌNOS (γονος) 'the sperm.' Hence, *Gonorrhœa* (ρεω, 'I flow') properly *Blennorrhœa*.

GONY (γόνυ) 'the knee.' Hence, *Gonyāgra* (αγχα, 'a seizure') gout in the knee. *Gonyalgia* (αλγος, 'pain') pain in the knee. *Gonyoneus* (ογκος, 'a tumour') swelling of the knee.

GYNĒ (γυνή, genitive γυναικος) 'a woman.' Hence, *Gynæcology* (λογος, 'a description') a treatise on the nature and diseases of women. *Gynandrus* (ανηρ, 'a man;' genitive ανδρος) an hermaphrodite.

## H.

HÆMA (ἄιμα, 'a man;' genitive ἄιματος) 'blood.' Hence, *Hæmadonōsos* (νοσος, 'a disease') a disease of the blood-vessels. *Hæmadostōsis* (οστέον, 'a bone') ossification of the blood-vessels. *Hæmatemēsis* (εμεω, 'I vomit') vomiting of blood. *Hæmatīca*, diseases of the sanguineous function. [GOOD.] *Hæmatōdes* (εἶδος, 'resemblance') blood-like, as *fungus hæmatodes*. *Hæmatōma*, a bloody tumour. *Hæmatophobia* (φοβος, 'dread') a dread of blood. *Hæmatopoiēsis* (ποιεω, 'I make') and *Hæmatōsis*, sanguification. *Hæmatūrēsis* and *Hæmatūria* (ουρεω, 'I pass urine') bloody urine.

*Hæmoptoë*, and *Hæmoptÿsis* (πτύω, 'I spit') spitting of blood. *Hæmorrhage* (ραγή, 'a breaking out') a preternatural flow of blood. *Hæmorrhœa* (ρεω, 'I flow') hemorrhage. *Hæmorrhoids* (same etymon) piles. *Hæmostatic* (στασις, 'stagnation') a styptic.

**HALS** (άλς, 'salt.') Hence, *Halogenium* (γενναω, 'I make.') Halogene. The basis of common salt. *Haloid* (ειδος, 'resemblance.') Like salt.

**HAPHĒ** (ἅψη, 'feeling,' 'touch.') *Haphonōsi* (ροσος, 'a disease.') Diseases of touch. *Amblyaphia* (αμβλυσ, 'dull.') Obtuseness of feeling.

**HELCOS** (έλκος, 'an ulcer.') *Helcōdes* and *Helcōides* (ειδος, 'resemblance,') ulcerous. *Helcōma* (έλκωμα) 'an ulcer,' especially of the cornea. *Helcōsis* (έλκωσις) 'ulceration.'

**HELIOS** (ἥλιος) 'the sun.' *Heliasis* (ἡλιασις,) and *Helioōsis* (ἡλιωσις) 'insolation.' Exposure to the sun.

**HELMINS** (ἑλμινς, genitive ἑλμινθος) 'a worm.' Hence *Helminthagogue* (αγω, 'I expel.') A vermifuge. *Helminthia*, and *Helminthiasis*, invagination. A worm disease. *Helminthica*, worm remedies. *Helminthology* (λογος, 'a discourse.') A treatise on worms. *Helminthopyra* (πυρ, 'fire,' 'fever.') Worm fever.

**HELOS** (ἑλος, 'a marsh.') Hence, *Helōdes* and *Heloīdes* (ειδος, 'form,' 'resemblance,') marshy; as *Febris helodes*, marsh fever, and *Helopyra* and *Helopyrētos* (πυρ, and πυρετος, 'fever,') having the same signification.

**HEMERA** (ἡμερα) 'a day.' Hence, *Hemeralopia* (οψις, 'sight.') Day-vision. Night-blindness.

**HEMI** (ἡμι, ἡμισυ, 'half,' 'semi.') Hence, *Hemicephālus* (κεφαλή, 'head.') One, who has half a head. *Hemicrania* (κρανιον, 'the cranium,') megrim; pain in one half the head. *Hemiotopia* (οψις, 'vision.') The sight of only half an object.



*Hemipagia* and *Hemipēgia* (παγος, πηγος, 'fastened,' 'nailed.')

*Hemicrania*, *clavus hystericus*. *Hemitritæus* (τριταίος, 'tertian;') happening on the third day.

**HĒPAR** (ἥπαρ, genitive, ἥπατος, 'liver.') *Hepatalgia* (αλγος, 'pain.') Pain in the liver. *Hepatapostēma* (αποστήμα, 'an abscess.') An abscess of the liver. *Hepatisation*. Conversion of the lung into a liver-like substance. *Hepatitis*. Inflammation of the liver.

**HERMES** (Ἑρμης, 'Mercury.') Hence, *Hermaphrodite* (Αφροδιτη, 'Venus.')

**HERNIA** (of uncertain etymon.) A rupture. *Herniotomy* (τομή, 'incision.') The operation for hernia.

**HĒTEROS** (ἕτερος) 'the one of two;' 'the other.' Hence, *Heterophōnia* (φωνη, 'voice.') A cracked or broken voice. *Heterorexia*, (ορεξις, 'appetite.') Appetite for all kinds of strange aliments.

**HEXIS** (ἕξις) 'habit,' 'constitution.' Hence, *Hectic* fever; a fever of the habit. *Cachexia* (κακος, 'bad.') A bad habit of body.

**HIDROS** (ἰδρως, genitive ἰδρωτος) 'sweat.' Hence, *Hidrōa*, and *Hidrōta*. A sweat or heat eruption. *Hidropyra* (πυρ, 'a fire or fever.') A sweating fever. *Sudor Anglicus*. *Hidrōsis* (ἰδρωσις) 'sweating.' *Hidrotērion* (ἰδροτήριον) 'a sudatorium or sweating place.'

**HIMAS** (ἱμας, genitive ἱμαντος) 'the uvula.' Also, elongation of the uvula. *Himantōma* (ἱμαντώμα) and *Himantōsis* (ἱμαντώσις) have the same signification.

**HIPPUS** (ἵππος) 'a horse.' Hence, *Hippiatrīa* (ιατρος, 'a physician.') The veterinary art. *Hippocampus* (καμπη, 'a winding.') A medullary projection in the posterior cornu of the lateral ventricle of the brain. *Hippotomy* (τομή, 'incision.') Anatomy or dissection of the horse.

**HISTOS** (ἵστός) 'texture.' The organic texture. Hence,

*Histogenia* (γινωμαι, 'to arise.') The formation of the organic textures. *Histology* (λογος, 'a description.') The anatomy of the organic textures; general anatomy. *Anhistous*, (αν, 'privative,') without organization, as the 'anhistous' membrane, or decidua. [VELPEAU.]

*HOMŒOS* (ὁμοιος) 'like.' Hence, *Homœopäthly* (παθος, 'disease.') The doctrine of Hahnemann—*similia similibus curantur*.

*HYALOS* (ὑαλος) 'glass.' Hence, *Hyalödes* and *Hyalöides*, (ειδος, 'resemblance.') Glass-like, as the hyaloid coat of the eye.

*HYDOR* (ὕδωρ, genitive ὕδατος) 'water.' Hence, *Hydatid*, a bladder of water, an acephalocyst. *Hydëros* (ὕδερως) 'dropsy,' especially anasarca. *Hydragogue* (αγω, 'I expel.') A cathartic that occasions watery evacuations. *Hydrargyria*, and *Hydrargyriasis* (αργυρος, 'silver.') The mercurial disease. *Hydrargyrum*, quicksilver. *Hydrarthrus* (αρθρον, 'a joint.') Dropsy of a joint. *Hydrencephalus* (εγκεφαλος, 'the brain.') Dropsy of the brain. *Hydræmia* (αἷμα, 'blood.') A watery state of the blood. *Hydroarion* (ωαριον, 'the ovarium.') Dropsy of the ovarium. *Hydrocardia* (καρδια, 'the heart.') Dropsy of the pericardium. *Hydrocēlē* (κηλη, 'a tumour.') Dropsy of the tunica vaginalis. *Hydrocephalus* (κεφαλη, 'head.') Dropsy of the head. *Hydrogenium* (γενναω, 'I form.') The gas hydrogen. *Hydromētra* (μητρα, 'the womb.') Dropsy of the womb. *Hydropathy* (παθος, 'a disease.') The water cure of the Germans. *Hydropericardium*. Dropsy of the pericardium. *Hydrophobia* (φοβος, 'dread.') *Hydrops* (ὕδρωψ) 'dropsy.' *Hydrorhachitis* (ραχις, 'the spine.') Dropsy of the spine. *Hydrothōrax*. Dropsy of the chest.

*HYGROS* (ὕγρος) 'moist,' 'wet.' Hence, *Hygrōma*, a watery swelling. *Hygrophobia*. *Hydrophobia*.

HYŌDES (ὕωδης) *Hyoïdes* (ὕοειδης) (from the letter ὕ, and εἶδος, 'resemblance.') *Hyoideus*; as *os hyoïdeum*, the hyoid bone. Hence, *Hyodeoglossus*, *Hyoglossus* (γλωσσα, 'the tongue.') A muscle arising from the hyoid bone, and passing to the tongue.

HYPER (ὑπερ) 'above,' 'in excess.' Hence, *Hyperæmia* (αἷμα, 'blood.') Turgescence of the capillary vessels. *Hyperæsthēsis* (αἰσθησις, 'feeling.') Excessive sensibility. *Hyperaphia* (ἅψη, 'touch.') Excessive acuteness of touch. *Hypercatharsis*, super-purgation. *Hyperdynamia* (δυναμις, 'force;') excessive strength. *Hyperemēsis*. Excessive vomiting. *Hyperencephalous* (εγκεφαλον, 'the brain.') A fœtus, having a kind of encephalocele, the brain being upon the cranium. *Hypererethisia* (ερεθίζω, 'I excite.') Excessive irritability. *Hyperidrōsis* (ιδρωσις, 'sweating.') Excessive sweating. *Hyperosphrēsia* (οσφρησις, 'smell.') Excessive acuteness of smell. *Hypersarcōma* (σαρκωμα, 'growth of flesh.') Luxuriant flesh. *Hypersthenia* (σθενος, 'strength.') Excessive vital power. *Hypertrophy* (τροφή, 'nutrition.') Supernutrition.

HYPNOS (ὑπνος) 'sleep.' Hence, *Hypnotic*, (ὑπνωτικός) 'a soporific.'

HYPO (ὑπο) 'under.' Hence, *Hypacticus* (ὑπακτικός) (αγω, 'I expel.') A cathartic. *Hypamaurōsis*, an imperfect amaurosis. *Hypæmia* or *Hypoæmia* (αἷμα, 'blood.') A deficiency of blood; also, extravasation of blood. *Hypochondria* (χονδρος, 'a cartilage.') The regions under the cartilages of the false ribs. *Hypochondriasis*. The disease of the hypochondres. *Hypochŷma* and *Hypochŷsis* (χυνω or χεω, 'I pour out.') A suffusion. A cataract. *Hypogastrium* (γαστήρ, 'the belly.') The lowest portion of the belly. *Hypoglossal* (γλωσσα, 'the tongue.') Lying under the tongue. The ninth pair of nerves. *Hypospadias*

(σπᾶω, 'I draw.') The opposite to Epispadias: the urethra terminating beneath the male organ. *Hypothēton* (θεσις, 'the act of placing.') A suppository.

**HYSTĒRA** (ὑστέρα, ὑστερη) 'the uterus.' Hence, *Hysteria*, a disease often referred to the uterus. *Hysteritis*, inflammation of the uterus. *Hysteroid* (ειδος, 'resemblance.') Resembling hysteria. *Hysteropsophia* (ψοφεω, 'I emit a sound,') discharge of wind from the uterus. *Hysteroptōsis* (πτωσις, 'a falling down') prolapsus uteri. *Hysterotomy* (τομη, 'incision') the Cæsarean section: also, *Hysterotomotocia* (τοκος, 'parturition.')

## I.

**IATROS** (ιατρος, 'a physician.') Hence, *Iatraliptic* (ιατραλειπτική) (αλειψω, 'I anoint') the art of applying by friction. *Iatrochemia*, medical chemistry. *Iatromathematicus*. A mathematical physician. *Iatrotechnica* (τεχνη, 'art') the healing art.

**ICHTHUS** (ιχθυς) 'a fish.' Hence, *Ichthyophāgus* (φαγω, 'I eat') a fish eater. *Ichthyōsis*. Fish skin,—a cutaneous disease. *Ichthyocolla* (κολλα, 'glue') fish glue. Isinglass.

**IDIOS** (ιδιος,) 'proper,' 'peculiar.' Hence, *Idiopathic* (παθος, 'affection') primary suffering, in contradistinction to symptomatic. *Idiosyncrasy*, and *Idiosyncrīsy* (συνκρασις, 'commixture;') *συνκρασις*, 'composition') peculiarity of constitution.

**IDROS**, see **HIDROS**.

**ILĒON**, **ILĪUM** (from ελεω, 'I roll') the gut *Ileum*: also, the bone of the pelvis on which the *Ileum* rests. *Ilēus*; volvulus,—a variety of colic,—the *Colica Ileus*. *Iliac*; referable to the *Ilium*; as *Iliac* passion; *Iliac* muscle.

**IMAS**, see **HIMAS**.

ION (ιον) 'the violet.' Hence, *Ionthus*, 'violet eruption;' some, however, derive it from ανθος, 'a flower;' others from ονθος, 'foulness' an eruption on the face.

IRIS (ιρις, genitive ιριδος) a rainbow. The Iris or diaphragm of the eye. *Iriancistron* and *Iridancistron* (αγκιστρον, 'a hook') an instrument used in the formation of artificial pupil. *Iridectōmia* εκτομη, ('excision') formation of an artificial pupil: also, *Iridotomy* (τομη, 'incision.') *Irītis*. Inflammation of the Iris.

ISCHIO (ισχω, 'I keep back,' 'I restrain,' 'I hold firm.') Hence, *Ischæmia* (αίμα, 'blood') suppression of hemorrhage. *Ischion* (ισχιον) the ischium. 'The hip. Seat bone. *Ischias*, pain in the hip. *Ischiadic*, and *Ischiatic*, Sciatic. *Ischialgia* (αλγος, 'pain') the same as *Ischias*. *Ischolochia* (λοχια, 'the lochia') suppression of the lochia. *Ischomēnia* (μην, 'a month') suppression of the menses. *Ischūria* (ουρον, 'urine') suppression of urine.

## L.

LAGOS (λαγος) 'a hare.' Hence, *Lagochilus* (χειλος, 'a lip') and *Lagostōma* (στομα, 'mouth') harelip.

LAMBDA (the Greek letter Λ, λαμβδα.) Hence, *Lambdacismus*. The frequent use of the L for the R. *Lambdoidal*, *Lambdōdes*, *Lambdōides* (ειδος, 'form') shaped like the letter Λ.—As the *Sutura lambdōidalis*.

LARYNX (λαρυγξ.) The upper part of the windpipe. Hence, *Laryngēal*, belonging to the larynx. *Laryngītis*, inflammation of the larynx. *Laryngotomy* (τομη, 'incision') cutting into the larynx.

LEIPO, see LIPO.

LEPIS (λεπις, genitive λεπιδος) LEPAS (λεπας, genitive

λεπιδος,) 'a scale.' Hence, *Lepidōdes* and *Lepidoīdes* (ειδος, 'form') Squamous, scaly; as the *Sutura lepidodes* vel *squamosa*.

LEPSIS (ληψις) 'a taking hold of,' from λαμβανω, 'I take.' Hence, *Epilepsy* (επι, 'upon') 'a seizing upon.' *Analepsis* (ανα, 'again') a recovery.

LEPTOS (λεπτος,) 'thin,' 'light.' Hence, *Leptophōnia* (φωνη, 'voice') a fine, delicate voice. *Leptotrophia* (τροφη, 'nourishment') light nutrition. *Leptysmus* (λεπτυσμος) emaciation: wasting.

LĒTHE (ληθη) 'oblivion, death.' Hence, *Lethargy* (εργον, 'work.') Stupor, morbid drowsiness. *Lethiferous* (φερω, 'I bear') death-bearing. Deadly.

LEUCOS (λευκος,) 'white.' Hence, *Leucæthiops* (αιθιοψ, 'an Æthiopian:' itself from αιθω, 'to burn,' and ωψ, 'the face') an Albino. *Leucōma* (λευκωμα) 'a whiteness of the cornea: also, Albumen. *Leucophlegmatia* (φλεγμα, 'phlegm.) a dropsical condition. *Leucorrhœa* (ρεω, 'I flow') *Fluor albus*.

LIEN (λειος, 'smooth, slippery,') [?]. The spleen. *Li-entery* (εντερον, 'intestine') a watery diarrhœa, with undigested food;—formerly, called 'slipperiness of the guts.'

LIMOS (λιμος) 'hunger.' Hence, *Limanchia*, (αγχω, 'I choke') and *Limoctonia* (κτονος, 'murder,' 'death') death from hunger. *Limōsis*, appetite for food impaired, excessive, or depraved. [Good.]

LIPA (λιπα,) 'fat,' and LIPAROS (λιπαρος,) 'fatty.' *Liparia*, fatness. *Lipōma*, a fatty tumour.

LIPŌ or LEIPO (λειπω) 'to leave,' 'to forsake.' Hence, *Lipopsychia* (ψυχη, 'the mind,') fainting; and, also, *Lipothymia* (θυμος, 'the soul or mind.')

LITHOS (λιθος) 'a stone.' Hence, *Lithagogues* (αγω, 'I expel') remedies for the stone. *Litharge* (λιθαργυρος)



(*αργυρος*, 'silver.') The semivitreous oxide of lead. *Lithiāsis*. A calculous disease. *Lithōdes*, *Lithoïdes* (*εἶδος*, 'form') stonelike;—as *Os Lithōdes*; the petrous portion of the temporal bone. *Lithonthryptic* (*θρυπτω*, 'I break to pieces') a solvent of stone. *Lithothrypsy* or *Lithotripsy* (*θρυψις*, or *τριψις*, 'a breaking,' 'crushing, or rubbing to pieces.') The art of breaking, or rubbing to pieces, stone in the bladder. *Lithotomy* (*τομή*, 'an incision') the operation for the stone. *Lithotrity* (*τριβω*, 'I break') an operation for breaking the stone in the bladder.

*Lochos* (*λοχος*) a woman in childbed. Hence, *Lochia*; the discharge from a childbed woman. *Lochodochium* (*δεχομαι*, 'to receive') a lying-in hospital.

*Læmus*, *Loimos* (*λοιμος*) 'plague.' Hence, *Læmology* (*λογος*, a 'discourse') the doctrine of contagious diseases. *Læmopyra* (*πυρ*, 'fever') the plague.

*Logy* (*λογος*, 'a description') a suffix denoting 'a treatise or description.' Hence, *Angiology* (*αγγειον*, 'a vessel') 'a description of the vessels.' *Neurology* (*νευρον*, 'a nerve') a description of the nerves. *Nosology* (*νοσος*, 'a disease') a description or arrangement of diseases.

*Lordos* (*λορδος*) 'bent, bent forwards.' Hence, *Lordōma* and *Lordōsis*, a curvature of the spine forwards.

*Lycos* (*λυκος*) 'a wolf.' Hence, *Lycanchē* (*αγχω*, 'I choke') hydrophobia. *Lycorexia* (*ορεξις*, 'appetite') a canine appetite.

*Lymphæ*, 'Lymph.' *Lymphangēitis* (*αγγειον*, 'a vessel') inflammation of the lymphatics. *Lymphangēon*, a lymphatic. *Lymphangiology* (*λογος*, 'a discourse') a treatise on the lymphatics.

*Lysis* (*λυσις*) 'a solution,' from *λυω*, 'I loosen.' Hence, *Paralysis* (*παρα*, 'throughout') a palsy. *Dialysis* (*δια*, 'through') a solution of continuity.

LYSSA (λυσσα, λυσσα) 'madness,' canine madness. *Lysso-*  
*dectos* (δηξις, 'a bite') one bitten by a mad dog.

## M.

MACROS (μακρος) 'extended;' 'long.' Hence, *Macrauchen*  
*(ανχην, 'neck')* a long neck. *Macrobiōsis* (βιος, 'life') a long  
 life. *Macronosia* (νοσος, 'disease') a chronic disease. *Ma-*  
*cropnoos* (πνοη, 'breath') long-winded.

MALACOS (μαλακος) 'soft.' Hence, *Malacosteon* (οστέον,  
 'a bone') *Mollitics ossium*.

MANIA (μανια) 'madness.' Hence, *Dæmonomania* (δαί-  
 μων, 'a spirit') religious mania. *Monomania* (μονος, 'alone')  
 madness on one subject.

MANTĪA, MANTICA, MANTICE (μαντεια, μαντικη, —in Eng-  
 lish, 'mancy') a common termination to words signifying  
 'divination.' As *Chiromancy* (χειρ, 'the hand,') divination  
 by the hand. *Oneiromancy* (ονειρος, 'a dream') divination  
 from dreams. *Necromancy* (νεκρος, 'dead') divination  
 through the dead.

MASĒSIS (μασησις) MASSĒMA, and MASSĒSIS, 'mastica-  
 tion.' Hence, *Massēter*, a muscle of mastication.

MASTUS (μαστος, μασθος) 'the mamma.' Hence, *Mastalgia*  
*(αλγος, 'pain')* pain in the mamma. *Mastitis*, inflammation  
 of the mamma. *Masticarcinōma* (καρκινωμα, 'cancer') can-  
 cer of the mamma. *Mastōdes*, *Mastoīdes* (ειδος, 'form')  
 mastoid; as the *mastoid* or *mamillary* process of the tem-  
 poral bone. *Mastodynia* (οδυνη, 'pain') pain in the mamma.  
*Masthelcōsis* (έλκος, 'ulcer') suppuration of the mamma.

MECON (μηκων, genitive μηκωνος) 'the poppy,' poppy-  
 head. Hence, *Mecōnium*, poppy-juice. Also, the first  
 excrement of the infant, which is dark-coloured, like poppy-  
 juice.

**MEGAS** (μεγας, feminine μεγαλη) ‘great.’ As *Megalocœlia* (κοιλια, ‘the intestines’) the great intestines. *Megalophōnia* (φωνη, ‘the voice’) a full, strong voice.

**MELAS** (μελας, feminine μελαινα; genitive μελανος) ‘black.’ Hence, *Melæna*, the black disease. A black discharge from the bowels. *Melancholy* (χολη, ‘bile’) black bile; *Atrabilis*. *Melanōsis*, a black degeneration or growth.

**MĒLĒ** (μηλη) ‘a probe,’ ‘a sound.’ A suffix to the names of certain surgical instruments. *Melōsis*, the act of sounding or probing.

**MELI** (μελι) **MEL**, ‘honey.’ *Melicēris* (κηρος, ‘wax’) a tumour, having contents like honey. *Melicraton* (κρασις, ‘mixture’) a drink of honey and water.

**MEN** (μην, genitive μηνος) *Mensis*. A month. Hence, *Menagogue* (αγω, ‘I expel’) an emmenagogue. *Menorrhagia* (ραγη, ‘a violent flow’) immoderate flow of the menses. *Menostāsis* (στασις, ‘stagnation’) retention of the menses.

**MENINX** (μηνιγξ, genitive μηνιγγος, ‘a skin or membrane;’ especially a membrane of the brain.) Hence, *Meninges* (μηνιγγες, plural of μηνιγξ) the membranes of the brain. *Meningea*, belonging to the membranes of the brain. *Meningion* (μηνιγγιον) a very delicate membrane, and especially the *Tunica arachnoides* of the brain. *Meningitis*, inflammation of the membranes of the brain.

**MĒROS** (μερος) ‘a part,’ ‘a member.’ Hence, *Meramaurosis*, incomplete amaurosis. *Meridrōsis* (ιδρωσις, ‘sweating’) a partial sweat. *Merobalneum* (balneum, βαλανειον, ‘a bath’) a partial bath.

*Mēros* (μηρος) also means ‘the thigh.’ Hence, *Merocēlē* (κηλη, ‘rupture’) Femoral hernia.

**MERYCISMUS** (μερυκισμος) rumination. Hence, *Merycology* (λογος, ‘a description’) the doctrine, or description of rumination.

MESOS (μεσος) 'middle, in the midst of.' Hence, *Mes- aræum* (αραιος, 'rare' 'thin,') *Mesenterium* (εντερον, 'an intestine') the mesentery; *Mesocōlon* (κωλον,) and *Mesorectum*. *Mesoscēlon*, (σκελος, 'the leg') the perinæum.

\* META (μετα) METH (μεθ') 'with, together with, after, change of form and place.' Hence, *Metacarpus* (μετα, 'after, behind;' and καρπος, 'the wrist,') *Metamorphōsis* (μορφη, 'shape') change of shape. *Metastāsis* (στασις, 'position') a change of position. *Metatarsus* (ταρσος, 'the middle foot, the instep,') The part beyond the tarsus—between it and the toes. *Methemerina* (ἡμερα, 'a day') daily; as *Febris Methemerina*; a quotidian. *Methōdus* (οδος, 'way') way, mode. *Metōpon* (ωψ, 'the eye') the forehead; and *Metopantron* (ωψ, 'the eye,' αυτηρον, 'a cavity') the frontal sinus. *Metopantritis*; inflammation of the frontal sinuses.

METER (μετρον, 'a measure') a suffix denoting a measurer. Hence, *Baromēter* (βαρος, 'weight') an instrument for measuring the weight of the air. *Pleximēter* (πληξις, 'percussion') an instrument for measuring sound on percussion.

MĒTRA (μητρα) *Matrix*, 'the womb.' Hence, *Metrhelcōsis* and *Metrelcōsis* (ελκος, 'ulcer') ulceration of the uterus. *Metrītis*, inflammation of the uterus. *Metrocarcinoma* (καρκινωμα, 'cancer') cancer of the womb. *Metromania*, furor uterinus. *Metroptōsis* (πτωσις, 'a falling down') prolapsus uteri. *Metrorrhagia* (εαγη, 'a violent flow') uterine hemorrhage. *Metrorrhœa* (ερω, 'I flow') a morbid discharge from the uterus. *Metrotomy* (τομη, 'incision,') The Cæsarean section.

MICROS (μικρος) 'small.' Hence, *Microcephālus* (κεφαλη, 'head') one who has a small head. *Microphōnia* (φωνη, 'voice') a small voice. *Microorchis* (ορχις, 'a testicle') one who has very small testicles.

MONOS (μονος) 'one, alone, only one.' Hence, *Mono-*

mania, insanity on one subject. *Monopagia* (παγος, 'fixed') fixed in one place; hemicrania. *Monophthalmus* (οφθαλμος, 'the eye') having one eye. *Monorchis* (ορχις, 'a testicle') having one testicle.

MORIA (μωγια) 'folly.' *Morocomium* (χομεω, 'I take care of') a mad house; also, *Morodochium* (δεχομαι, 'to receive.')

MORION (μοριον) 'a part.' Hence, *Morioplasticē* (πλαστικός, 'forming') *chirurgia curtorum*. The restitution of lost parts.

MORPHĒ (μορφη) 'shape,' 'form.' Hence, *Morphotomy* (τομη, 'incision') general anatomy.

MYCTER (μυκτερ) 'the nose.' The nasal fossæ. *Mycterophōnia* (φωνη, 'voice') a nasal voice.

MYĒLOS (μυελος) 'the marrow;' especially the spinal marrow. Hence, *Myelitis*, inflammation of the spinal marrow. *Myelophthisis*; *tabes dorsalis*.

MYIA (μυια) *musca*, 'a fly.' Hence, *Myiodeopsia*, and *Myodesopsia* (οψις, 'vision.') *Muscæ volitantes*: appearances of flies before the eyes.

MYLĒ (μυλη) *mola*, 'a mill,' 'a mole;' the jaw. In composition—as in the names of the muscles, *Mylohyoideus*, *Mylopharyngeus*, &c.—it signifies the jaw.

MYs (μυς) 'a mouse,' *mus*; also, a muscle, *musculus*.

Hence, *Myasthenia* (α, privative, and σθενος, 'strength.') Debility of the muscles. *Myenergĩa*, (εν, and εργον, 'work.') Muscular strength. *Myitis*. Inflammation of the muscles. *Myology* (λογος, 'a description.') A treatise on the muscles. *Myopia* (οψις, 'vision;') mouse-eye; short-sightedness; also *Myōsis*.

## N.

NARCA, NARCĒ (ναρκα, ναρκη,) 'stupor.' Hence, *Narcō-*  
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sis; the effect of a narcotic: stupefaction: *Narcotism*: the narcotic condition.

NAUSEĀ (ναυσία, ναυτία) 'sickness at the stomach;' properly sea-sickness; from ναυς, 'a ship.' Hence, *Nauseous* and *Nautiōdes*, (ναυτιωδης) 'exciting nausea.'

NECROS (νεκρος) 'death.' Hence, *Necrology* (λογος, 'a discourse.') An obituary; a description of death. *Necromancy* (μαντεία, 'divination.') Divination by the dead. *Necrōsis*,—death,—as of a bone. *Necropsy* (οψις, 'sight,') and *Necrotomy* (τομη, 'incision.') Dissection; examination after death.

NEOS (νεος) *novus*, 'new,' 'fresh.' Hence, *Neogāla* (γαλα, 'milk.') The first milk or colostrum. *Neognos* (γεογνος) (γενω, 'I beget.') A new-born infant.

NEPHIOS (νεφος,) *nubes*, 'a cloud.' Hence, *Nephēla*, *Nephēlē* (νεφέλη,) and *Nephelium* (νεφελιον) 'a little cloud;' nubecula; a speck on the cornea. *Nephelōdes* (νεφελωδης) *nubilosus*, cloudy.

NEPHROS, (νεφρος) *ren*, 'a kidney.' Hence, *Nephralgia* (αλγος, 'pain.') Pain of the kidney. *Nephritis*, inflammation of the kidney. *Nephrolithiasis* (λιθος, 'a stone.') The disease of renal calculus. *Nephroncus* (ογκος, 'a tumour.') A swelling of the kidney.

NEURON (νευρον, *nervus*,) 'a nerve.' Hence, *Neuralgia* (αλγος, 'pain.') Nerveache. *Neurilēma*, or *Neurilyma* (ειλω, 'I envelop.') The sheath of a nerve. *Neuritis*, inflammation of a nerve. *Neurōdes* (ειδος, 'like,') *nervosus*, nervous. *Neurology* (λογος, 'a discourse.') A description of the nerves. *Neuronōsos* (νοσος, 'a disease.') A disease of the nerves. *Neuropathic* (παθος, 'affection.') Belonging to disease of the nerves.

Nosos (νοσος) 'a disease.' Hence, *Nosocomium* (νομεω, 'I take care of.') An hospital; and *Nosodochium* (δεχω, 'I



receive.') *Nosology* (λογος, 'a description.') The doctrine of disease; generally, the classification of diseases.

*Nostos* (νοστος) 'a journey home.' Hence, *Nostalgia* (αλγος, 'pain,') and *Nostomania*, homeache.

*Notos* (νωτος) 'the back.' Hence, *Notalgia* (αλγος, 'pain,') Pain in the back. *Notencephälus* (εγχεφαλον, 'the brain.') A fœtus having the head with the brain on the back.

*Nux* (νυξ, genitive νυκτος) 'night.' Hence, *Nyctalopia* (ωψ, 'the sight,') Night-sight; day-blindness. *Nyctobatësis* (βαινω, 'I go,' 'I wander,') Somnambulism.

*NYMPHÆ* (νυμφα, νυμφη, 'a bride.') The lesser labia of the female parts of generation. *Nymphomania*, *Furor uterinus*. *Nymphotomy* (τομη, 'an incision,') The removal of the nymphæ.

## O.

*OARION* (ωριον) (ωον, 'an egg.') The ovarium; also, called *Oophöron* (φερω, 'I carry,') The egg vessel. Hence, *Oaritis*, inflammation of the ovarium.

*ODOUS* (οδους, genitive οδοντος) 'a tooth.' Hence, *Odontagögum* (αγω, 'I expel,') and *Odontägra* (αγρα, 'a seizure,') An instrument for extracting teeth. *Odontalgia* (αλγος, 'pain,') toothache. *Odontiasis*, dentition, and painful dentition. *Odontia*, pain or derangement of the teeth or their sockets. [GOOD.]

*ODYNE* (οδυνη) 'pain.' A very common suffix; as in *Anodyne*, *Pleurodyne*, &c.

*ŒDEMA* (οιδημα) from οιδω, 'I swell.' A swelling;—especially a watery swelling. Hence, *Œdematous*,—of the nature of œdema; and *Œdematoid* (ειδος, 'resemblance,') Resembling œdema.

*ŒNUS* (οινος) 'wine.' Hence, *Œnomania*, delirium tremens.

**ŒSOPHĀGUS** (οισοφαγος,—from οιω, ‘I carry;’ and φαγω, ‘I eat.’) The gullet. Hence, *Œsophagītis*, inflammation of the Œsophagus. *Œsophagotomy* (τομη, ‘incision.’) An incision into the Œsophagus.

**ŒSTRUS** (οιστρος) ‘a violent impulse or desire.’ Hence, *Œstrus venereus*, and *Œstromania*, nymphomania.

**OID** and **ODE**, (see EIDOS.)

**OLĒNĒ** (ωλενη) *ulna*, ‘the elbow.’ Hence, *Olecrānon* or *Olecrānon* (κρανον, ‘the head.’) The head of the elbow:—the *Acrolenion*. (See ACROS.)

**OLIGOS** (ολιγος,) ‘few,’ ‘little.’ Hence, *Oligæmia* (αιμα, ‘blood.’) Paucity of blood. *Oligotrōphia* (τροφη, ‘nourishment.’) Defective nutrition.

**OMOS** (ωμος) ‘the shoulder.’ Hence, *Omāgra* (αγρα, ‘a seizure.’) Pain or gout in the shoulder.

**OMPHĀLUS** (ομφαλος) ‘the navel.’ The *Umbilicus*. Hence, *Omphalelcōsis* (ελκος, ‘ulcer.’) Ulceration of the navel. *Omphalītis*, inflammation of the navel. *Omphalocēlē* (κηλη, ‘rupture.’) Umbilical hernia.

**ONCOS**, **ONCUS** (ογκος) ‘a tumour.’ *Oncōses*; tumours, as diseases. *Oncotomy* (τομη, ‘incision.’) The opening of an abscess, or removal of a tumour.

**ONEIROS** (ονειρος) ‘a dream.’ Hence, *Oneirodynia* (οδυνη, ‘pain.’) A painful dreaming. *Oneirogmus*, (ονειρωγμος) ‘a lively dream.’ Nocturnal pollution.

**ONYX** (ονυξ, genitive ονυχος, ‘a nail.’) Hence, *Onychop-tōsis* (πτωσις, ‘a falling off.’) Loss of a nail.

**OPHTHALMOS** (οφθαλμος) ‘the eye.’ Hence, *Ophthalmia*, and *Ophthalmītis*, ‘inflammation of the eye.’ *Ophthalmiater* (ιατρος, ‘a physician.’) An oculist. *Ophthalmocarcinōma* (καρκινωμα, ‘cancer.’) Cancer of the eye.

**OPISTHĒ** (οπισθε) ‘from behind,’ ‘backwards.’ Hence, *Opisthocephālon* (κεφαλη, ‘head’) the back part of the head.

*Opisthotōnos* (τενω, 'I extend'). *Tetanus dorsalis posticus*.

**OPS** (ωψ) 'the eye, the look.' Hence, **OPSIS** (οψις) 'sight,' 'vision,' and *Opsionūsi* (νοῦσοι, 'diseases') diseases of vision. *Amblyopia* (αμβλυσ, 'dull.') Dulness of vision. *Autopsy* (αυτος, 'himself') self-inspection. *Diplopia* (διπλοος, 'double') Double vision. *Cyclopia*, (κυκλος, 'a circle') the state of having one eye; and *Monopsia* (μονος, 'one') having the same signification.

**ORCHIS** (ορχις, genitive ορχεως, and ορχιδος) 'the testicle.' Hence, *Orcheotomy* (τομη, 'incision') and *Orchidotomy*. Castration. *Orchītis*. Inflammation of the testicle.

**ORCHOS** (ορχος) 'a row:' as of the eyelashes. The tarsus. *Orchotomy* (τομη, 'incision') the removal of the tarsus.

**OREXIS** (ορεξις) 'appetite.' Hence, *Anorexia* (α or αν, 'privative') want of appetite.

**ORTHOS** (ορθος) 'right,' 'upright.' Hence, *Orthopædia* (παις, genitive παιδος, 'a child') the art of correcting or preventing deformities in the young. *Orthophrenic* (φρην, 'mind.') Belonging to right mind. *Orthopnœa* (πνοη, 'breathing') dyspnœa, requiring the patient to be erect.

**OSCHÊ** (οσχη) 'the scrotum.' Hence, *Oschītis*. Inflammation of the scrotum. *Oschocarcinōma* (καρκινωμα, 'cancer') *cancer scroti*.

**OSMÊ** (οσμη, 'an odour,' from οἶω, 'I smell'). *Ozæna*, (οἶαινα) a fetid ulcer of the nose, is from the same root. *Osmonōsi* (νοσος, 'a disease') diseases of the sense of smell.

**OSMOS** (ωσμος, 'a pushing'). Hence, *Endosmose* (ενδον, 'within') an inward impulsion. *Exosmose* (εξ, 'out'). An outward impulsion.

**OSPHRASIA** (οσφρασια) 'an odour.' *Osphrēsis*, (οσφρησις) 'the sense of smell.' Hence, *Osphresiology*, (λογος, 'a discourse') a treatise on, or description of, odours.

OSPHYS (οσφυς) *Coxa*. 'The hip.' Hence, *Osphyalgia* (αλγος, 'pain') coxalgia. Pain in the hip. *Osphyitis*, inflammation of the parts about the hip.

OSTEON (οστέον) 'a bone.' Hence, *Ostarion*, a little bone. *Osteocöpus* (κοπος, 'fatigue,' 'pain') pain or fatigue in a bone: also, *Ostcalgia* (αλγος, 'pain') and *Ostcodynia* (οδυνη, 'pain.') *Osteology* (λογος, 'a discourse.') A description of the bones. *Osteomalacia* (μαλακος, 'soft') softness of bones. *Osteonösi* (νοσος, 'a disease') diseases of bone. *Osteosarcöma* (σαρξ, 'flesh') a kind of fleshy swelling of bone. *Osteösis* and *Ostösis*; a bony tumour; ossification. *Osteosteätöma* (στεατώμα, 'a fatty tumour;') a kind of suety tumour of bone.

OTA (ωτα) 'the ears.' Hence, *Otägra* (αγρα, 'seizure') an ear pick. *Otalgia* (αλγος, 'pain') earache. *Otenchÿtes* (εγχνω, from εν, and χνω, 'I pour') an ear syringe. *Otica*. Remedies for the ear. *Otitis*, Inflammation of the ear. *Otorrhœa* (ρέω, 'I flow.') A discharge from the ear.

OXYΣ (οξύς) 'acute, sharp, sour.' *Oxos* (οξύς), 'vinegar.' *Oxide*. A diminutive of *oxos*. *Oxyeratum* (κρασις, 'a mixture') a mixture of vinegar, honey, and water. *Oxyecoïa* (οξύηκοια) (ακοη, 'audition,') too great acuteness of hearing. *Oxygäla* (γαλα, 'milk') sour milk. *Oxygen* (γενω, 'I make') the oxidizing gas. *Oxymel* (μελι, 'honey') a mixture of vinegar and honey. *Oxynösos*, *Oxynosëma* (νοσος, 'a disease') an acute disease. *Oxyopia* (ωψ, 'vision') acuteness of vision. *Oxyosphrësia* (οσφρησις, 'smell') acuteness of the sense of smell. *Oxyphlegmasia* (φλεγμασια, 'inflammation.') Acute inflammation. *Oxyregmia* (ερενγομαι, 'to belch.') An acid eructation.

## P.

PACHYS (παχυσ) 'thick,' 'fat,' 'fleshy.' Hence, *Pachæ-*

mia, and *Pachyæmia* (αῖμα, 'blood.') Too great thickness of the blood.

PAIS (παις, genitive παιδος) 'a boy,' 'a child.' Hence, *Pædatröphia* (α, privative, and τροφή, 'nourishment.') Atrophy of children.

PALIN (παλιν) 'again.' Hence, *Palindrömia* (δρομος, 'a race,' 'a course.') A relapse.

PALMOS, PALMUS (παλμος) 'palpitation.' *Palmic*, belonging to palpitation.

PAN (πας, πασα, παν, genitive παντος) 'all.' *Panplëgia* or *Pamplëgia* (πληγη, 'a stroke.') General palsy. *Panchymagogue* (χυμος, 'a juice,' αγω, 'I expel.') A cathartic, which evacuates every thing. *Pancrëas* (κρεας, 'flesh,') 'all flesh.' The sweetbread. *Pancreatitis*, inflammation of the pancreas. *Pantagogue* (αγω, 'I expel;') a panchymagogue. *Pantophobia* (φοβος) 'a universal dread.'

PARA (παρα) 'by, near, contrary to, through, (*per*) above, and beyond, (*ultra*); besides, (*præter*.)' Hence, *Paracentësis* (παρακεντησις) (κεντεω, 'I stick.') A perforation of the abdomen, in ascites. *Paraemë* (ακμη, 'the top.') The stage of declension, after a disease has attained the height. Hence, also, *Paracmastic*. *Paralýsis* (λω, 'I loosen;') palsy. *Paraphimösis* (φιμω, 'I constrict,' 'I bind tight.') A constriction of the prepuce behind the glans. *Paraplëgia*, and *Paraplexia* (παραπληξια,) (πληγη, 'a stroke.') Paralysis of a part,—usually of the lower part,—of the body. *Paratöpia* (τοπος, 'a place.') A dislocation. *Paregoric* (παρηγορεω, 'I soothe.') A soothing remedy. *Parenchýma* (εγχυμα, 'an infusion;') εν, 'in,' and χυω, 'I pour.') The substance of a tissue, which is cellular or interstitial. *Parësis*, (ιημι, 'to send;') paralysis. *Paristhmitis* (ισθμος, 'a passage through,' the fauces.) Inflammation of the tonsils. *Paronychia* (ονυξ, 'a nail;') whitlow. *Parotid* (ους, ωτος, 'the ear;') near the ear. *Parülis* (ουλον, 'the gum;') gumboil.

In the terms *Paracusis* (ακουσις, 'the act of hearing,') morbid hearing, *Parapsis* (αψις, 'touch,') morbid touch, *Parabysma* (βυσμα, 'a stopping up,') morbid engorgement, *Parosmis*, (οσμη, 'smell,') morbid smell, *Paruria* (ουρεω, 'I pass the urine,') morbid micturition, &c. &c.—used by Dr. Good—*para* means a defective or morbid condition.

**PATHOS** (παθος) 'a disease.' Hence, *Pathēma*, (παθημα) and *Pathematology* or *Pathology* (λογος, 'a discourse,') The doctrine, or description, of disease. *Pathognomonic* (γνωσις, 'discernment,') characteristic of a disease. *Idiopathic* (ιδιος, 'peculiar,') primary, as opposed to symptomatic.

**PELLA** (πελλα) *Pellis*, 'the skin.' Hence, *Pellāgra* (αγγρα, 'a seizure,') A cutaneous disease of Italy.

**PELYS, PELYX, PELLIS** (πελυσ, πελυξ, πελλις, 'a dish' or 'bowl,') The pelvis. Hence, *Pelyomēter*, or *Pelyeomēter* (μετρον, 'measure,') A pelvimeter.

**PEPSIS** (πεψις) (πεσσω, 'I concoct,' 'I digest,') digestion; *Pepansis* and *Pepasmus*, concoction. *Pepastic* and *Peptic*, concerning digestion; *Dyspepsia* (δυσ, 'with difficulty,') indigestion.

**PERI** (περι) 'about,' 'on all sides,' 'round about.' An augmentative. Hence, *Perialgia* (αλγος, 'pain,') A severe and general pain. *Perianna* and *Periapton* (περιαμμα, περιapτον) (απτω, 'I hang to,') An amulet. *Pericardium* (καρδια, 'the heart') the membrane surrounding the heart. *Perichondrium* (χονδρος, 'a cartilage') the membrane covering a cartilage. *Pericranium* (κρανιον, 'the skull') the membrane covering the skull. *Perinæum* (ναος, 'temple' (?)) the space between the parts of generation and the anus. *Periosteum* (οστεον, 'a bone') the membrane covering a bone. *Peripneumōnia* (πνευμωνια, 'inflammation of the lungs') pneumonitis. *Peristaltic* (στελλω, 'I send') vermicular



motion, as of the intestines; *Peristölē*. *Peritonēum* (τεινω, 'I stretch') the membrane lining the abdomen.

PERÖNE (περονη, 'a clasp.') The fibula. Hence, *Peronæus*, a muscle of the fibula.

PETRA, PETROS (πετρα, πέτρος, 'a stone.') The petrous or hard portion of the temporal bone. Hence, *Petrelæum* (ελαιον, 'oil') petroleum, rock or stone oil.

PHACOS (φακος) 'a lentil or lens;' also, 'a freckle.' *Phacitis*, inflammation of the crystalline lens. *Phacopsis* (ωψ 'face') one with a freckled face. *Phacoscotōma* (σκοτωμα, 'darkness') cataract.

PHAGO (φαγω,) 'to eat.' Hence, *Phagæna* and *Phagedæna*, an eating ulcer. *Dysphagia* (δυσ, 'difficult') difficulty of deglutition.

PHALÁCROS (†αλακρος,) 'bald.' Hence, *Phalacrōma*, baldness; and *Phalacrōtes*.

PHALANX and PHALANGĒ (φαλαγξ, and φαλαγγη,) 'a row or series.' The small bones of the fingers and toes are called *Phalanges*. *Phalangōsis* (φαλαγγωσις) trichiasis. *Phalangettianus*, any thing relating to the third phalanx of the fingers or toes. *Phalangianus*, any thing relating to the first phalanx. *Phalangingianus*, any thing relating to the second.

PHALLUS (φαλλος) 'the penis.' Hence, *Phallocarcinōma* (καρκινωμα, 'cancer') cancer of the penis. *Phallorrhagia* (ξαγη, 'a violent flow') hemorrhage from the male organ.

PHARMĀCON (φαρμακον) 'a medicine.' Hence, *Pharmacēum* (φαρμακειον) an apothecary's shop; a pharmacy. *Pharmaceuticē*, *Pharmacia*, the art of preparing medicines; Pharmacy. *Pharmacology* (λογος, 'a discourse') materia medica. *Pharmacopœia* (ποιεω, 'I make') an officinal direction for the preparation of medicines. *Pharmacopōla* (πωλεω, 'I vend') a vender of drugs; an apothecary.

PHARYNX (φαρυγξ,) PHARYX (φαρυξ,) PHARUS (φαρος) ‘the swallow;’ the top of the gullet. Hence, *Pharyngitis*, inflammation of the pharynx. *Pharyngotomy* (τομή, ‘incision’) the operation of cutting into the pharynx.

PHATNĒ (φατνη) PHATNION (φατνιον) an alveolus. Hence, *Phatnorrhagia* (εργη, ‘a violent flow’) hemorrhage from the alveoli.

PHIMOS (φίμος) ‘a muzzle, a bit.’ Hence, *Phimōsis*. A constriction of the prepuce, so that it cannot be drawn back over the glans.

PHLEBS (φλεψ) ‘a vein.’ Hence, *Phlebeurysma* (ευρυσμα, ‘dilatation’) a varix. *Phlebitis*, inflammation of a vein. *Phlebotomy* (τομή, ‘incision’) venesection.

PHLEGMA (φλεγμα, genitive φλεγματος) ‘heat, inflammation;’ also, phlegm. Hence, *Phlegmagogue* (αγω, ‘I expel’) a cathartic, that expels mucus. *Phlegmasia*, inflammation. *Phlegmatia*, a watery or phlegmatic swelling. *Phlegmatopyra* (πυρ, ‘fever’) a mucous fever. *Phlegmatorrhœa* (ῥέω, ‘I flow’) a catarrh. *Phlegmon* (φλεγμονή) inflammation; also, an inflammatory swelling. *Phlegmonōdes* (ειδος, ‘resemblance’) inflammatory. *Phlegmymenitis* (ῥμην, a ‘membrane’) inflammation of a mucous membrane.

PHLOX (φλωξ) ‘flame.’ Hence, *Phlogōdes* (ειδος, ‘form, resemblance’) inflamed. *Phlogopyra* (πυρ, ‘fever’) inflammatory fever. *Phlogōsis*, inflammation. *Phlogotica*, inflammations.

PHLYCTIS (φλυκτις) and PHLYCTÆNA (φλυκταινα) (from φλυω, φλυζω, ‘I boil’) a vesicular eruption. *Phlyctænoid* (φλυκταινωδης) resembling Phlyctænæ. *Phlyzacium* (φλυζακιον) a vesicular eruption. *Phlysis*, a genus to which *Paronychia* belongs. [Good.]

PHOBOS (φοβος) ‘dread.’ Hence, *Phobodipson* (διψα, ‘thirst’) hydrophobia.

PHONĒ (φωνη) 'voice.' Hence, *Phonica*, *Phononösi* (νοσος, 'a disease') diseases of the voice. *Aphōnia* (a privative) loss of voice. *Dysphōnia* (δυσ, 'difficult') impaired voice.

PHOROUS (φερω, 'I carry') a suffix denoting conveyance. Hence, *Galactophōrous* (γαλα, γαλακτος, 'milk') a conveyor of milk.

PHREN (φρην) 'the mind.' The diaphragm. Hence, *Phrenitis*, inflammation of the brain; also *Phrenēsis*, *Phrenetasis*, and *Phrenetismus*. *Phrenic*, belonging to the diaphragm. *Phrenology* (λογος, 'a discourse') the doctrine of the mind; craniology.

PHRIX (φριξ, genitive φρικος) PHRICĒ (φρικη) PHRICASMUS (φρικασμος) 'shivering.' Hence, *Phricōdes* (ειδος, 'form') *Febris algida*.

PHTHEIR (φθειρ) 'a louse.' Hence, *Phtheiritasis* or *Ptheriasis*. The *Morbus pediculosus*.

PHTHOĒ (φθοη) (φθιω, 'I waste away.') *Phthsis*, consumption. Hence, *Phthisical*, consumptive. *Pthisuria* (ουρον, 'urine') diabetes mellitus.

PHYMA (φυμα, genitive φυματος) (φνω, φνωω, φυσω, 'I inflate') a swelling. *Phymatīcus*, belonging to a swelling. *Phymation* (φυματιον) a small boil. *Physa* (φυσα) a bladder. A bulla or bleb. *Physconia*, a prominence of the lower belly. Pot belly. *Physēma*, inflation with wind. *Physomētra* (μητρα, 'the womb') inflation of the womb by air. *Physothorax*, pneumothorax.

PHYSIS (φυσις—φνω, 'I generate') nature. Hence, *Physics*, the doctrine of nature; and *Physiology* (λογος, 'a discourse') now generally restricted to the doctrine of the functions of the human body. *Physiognomy* (γνωσις, 'discrimination') the art of judging of disposition, &c. by the countenance. *Physiatricē* (ιατρικη, 'the healing art') the *vis medicatrix naturæ*.

PHYTON (φυτον) 'a plant,' 'a vegetable' (same etymon.) *Phytology* (λογος, 'a discourse') botany. *Phytotomy* (τομή, 'incision') vegetable anatomy.

PICROS (πικρος) 'bitter.' Hence, *Picromel* (μελι, 'honey,' having the consistence of honey) the bitter principle of the bile. *Picrotoxine* (τοξικον, 'a poison') 'bitter poison.' The poisonous principle of the *Cocculus Indicus*.

PITYRON (πιτυρον) 'bran.' Hence, *Pityriasis*, dandriff.

PLAGA, PLĒGE (πληγή) 'a stroke.' Hence, *Hemiplēgia*, &c.

PLASTIC (πλαστικός) 'forming, formative.' Hence, *Plasticismus*, the formative impulse, or *buildingstrie*b. *Blepharoplasty*, *Cheiloplasty*, *Rhinoplasty*, &c. &c.

PLATYS (πλατυς, 'flat, broad.') Hence, *Platysma* (πλατυσμα) a broad surface;—as *Platysma-myodes*, a broad muscle of the neck.

PLĒRĒS (πληρης) PLĒNUS: 'full.' Hence, *Plerōsis*, and *Plerōma*. Fulness. Repletion. *Plethōra* (πληθωρη, from πληθω, 'I fill') fulness of vessels.

PLEURA (πλευρα, 'the membrane lining the chest') (from πληρης [?]). Hence, *Pleuralgia* (αλγος, 'pain') and *Pleurōdŷnē* (οδυνη, 'pain') pain in the side. *Pleurēsia* and *Pleurītis*. Inflammation of the pleura. *Pleurothotōnos* (πλευροθεν, 'from the side,' and τεινω, 'I extend') tetanus lateralis.

PLEXIS (πληξίς) same as PLAGA and PLĒGĒ, 'a stroke.' Hence, *Pleximēter* (μετρον, 'measure,') the measurer of a stroke. An instrument used in percussion.

PNEUMA (πνευμα, 'air, wind.') Hence, *Pneumatic*, belonging to air. *Pneumatica*, diseases of the respiratory function. [Good.] *Pneumatōsis*, flatulence. *Pneumothōrax*, and *Pneumothōrax* (θωραξ, 'the chest') wind in the cavity of the chest. *Pneumōnia* and *Pneumonītis*, inflan-

mation of the lungs. *Pneumonīca*, diseases affecting the lungs, their membranes or motive power. [GOOD.]

PNIGMA (πνιγμα) PNIXIS (πνιξις) PNIX (πνιξ): from πνιγω, 'I strangle.' Strangulation. Suffocation: A high degree of asthma. Hence, *Pnigalion* (πνιγαλιων) the nightmare.

PNOË (πνοη) and PNEA (πνοιη) 'breath.'—Hence, *Dyspnæa*, *Orthopnæa*, &c.

PODOS (genitive of πους, *pes*, 'the foot.') Hence, *Podāgra* (αγρα, 'a seizure') gout. *Podencephalus* (εγκεφαλον, 'the brain.') A fœtus having the brain on a kind of pedicle.

POLYS (πολυς, 'many: full.') Hence, *Polyæmia* (αῖμα, 'blood') Plethora. *Polychrestus* (χρησω, 'to use') much used;—as *Sal Polychrestum*. *Polydipsia* (διψα, 'thirst') much thirst. *Polypus* (πους, 'a foot') having many feet. A tumour compared to certain zoophytes. *Polysarcia*. Having much flesh. Obesity: also, *Polysomatia* (σωμα, 'the body.') *Polytrophia* (τροφη, 'nourishment') supernutrition.

POMPHOS (πομφος, 'a blister,' 'a bleb,' 'a vesicle.') The same as *Pemphix*, and *Pemphigus*, and *Pompholyx*.

POSIA, POSIS (ποσις, 'drinking.') Hence, *Brachyposia* (βραχυς, 'short') drinking little. The same as *Hydrophobia*.

POSTHË (ποσθη, 'the prepuce:' also, 'the penis:') *Posthetomy* (τομη, 'incision') circumcision. *Posthitis*, inflammation of the prepuce.

PRESBYS, (πρεσβυς, 'old.') Hence, *Presbyopia* (ωψ, 'vision.') The vision of the aged. Long-sightedness.

PRIAPUS (Πριαπος) the god Priapus: also, the penis. Hence, *Priapism*. Constant and distressing erection.

PRO (προ) PROS (προς) 'before.' Hence, *Procatartec* (κατα, and αρχω, 'I begin') precursory, preparatory. *Prodrōmus* (δρομαω, 'I run,') (προδρομος.) A precursor, forerunner. A premonitory. *Proegumēnos* (γγεομαι, 'to precede.') The

same as Procatarectic. *Prognōsis* (γνωσις, 'discrimination.') Judgment regarding the future progress of a disease. *Prophylaxis* (φύλασσω, 'I guard') prevention. *Proptōsis* (πτωσις, 'a falling down') prolapsus; and *Proptōma*. *Prosōpon* (ὤψ, 'the eye') the forehead. *Prosopalgia* (αλγος, 'pain') pain in the forehead. *Prostate* (σταω, 'I stand') the prostate gland. *Prostatītis*. Inflammation of the prostate.

**PROCTOS** (προκτος) 'the anus.' Hence, *Proctalgia* (αλγος, 'pain') pain in the anus. *Proctītis*. Inflammation of the anus. *Proctocēlē* κήλη, ('rupture;') *Proctoptōma* (πτωμα, 'a falling down') and *Proctoptōsis* (πτωσις, 'a falling down') Prolapsus ani.

**PROTOS** (πρωτος) 'the first.' As *Protogāla*, (γαλα, 'milk') the colostrum or first milk.

**PSEUDOS** (ψευδος) 'false.' Hence, *Pseudacōē* (ακοη, 'audition,') false hearing. *Pseudæsthēsis* (αἰσθησις, 'feeling') depraved feeling. *Pseudomēninx* (μηνιγξ, 'a membrane') a false membrane. *Pseudomorphē* (μορφή, 'form.') A false or irregular form. *Pseudopia*, *Pseudopsia*, *Pseudopsis* (ὀψις, 'vision.') False vision. *Pseudosyphilis*, spurious syphilis.

**PSILOS** (ψιλος) 'bald, naked: bare.' Hence, *Psilōma* (ψιλωμα) 'baldness.' *Psilōsis* (ψιλωσις) the act of making bald. *Psilōthron* (ψιλωθρον) a depilatory.

**PSOA** (ψοα) 'the region of the loins.' Hence, *Psoas*, applied to a muscle, and an abscess. *Psoītis*. Inflammation of the psoas muscle.

**PSOPHOS** (ψοφος) 'a rattling noise.' Hence, *Psophēma* (ψοφημα,) and *Psophēsis* (ψοφησις.) A sonorous discharge of wind.

**PSORA** (ψωρα) 'the itch.' Hence, *Psorīasis*. An itching eruption. *Psorophthalmia* (οφθαλμος, 'the eye') an itching ophthalmia.

**PSYCHĒ** (ψυχη) 'the soul, the mind.' Hence, *Psychology*



(λογος, 'a description') the doctrine of the mind: mental philosophy.

PSYCHROS (ψυχρος) 'cold: frosty: cool.' Hence, *Psychrolūtron* (λουω, λουτρεω, 'to wash') the cold bath. *Psychroposia* (ποσις, 'drink') the use of cold drinks. *Psyceticus*. A refrigerant.

PTARMOS (παρμος,) sneezing, sternutation. Hence, *Ptarmica*. Sternutatories.

PTERYX (περυξ) 'a wing.' Hence, *Pterygium* (περυγιον) a small wing. An aliform formation, extending from the lachrymal caruncle towards the cornea. *Pterygōdes*, *Pterygoid* (ειδος, 'shape') wing-shaped; as the *Pterygoid processes*.

PTŌCHOS (πτωχος) 'a poor person.' Hence, *Ptochomīum* (χομεω, 'I take care of') and *Ptochodochīum* (δεχομαι, 'I receive') an alms-house.

PTŌMA (πτωμα) 'a fall;' and PTŌSIS (πτωσις) 'falling.' Common suffixes denoting Prolapsus;—as *Archoptōma*, and *Archoptōsis* (αρχος, 'the anus.') Prolapsus ani.

PTYALON, PTYĒLON (πτυαλον, πτυελον) 'saliva,' (πτυνω, 'to spit.') Hence, *Ptyalagogues* (αγω, 'to expel') salivants. *Ptyalism*; salivation. From the same root proceed, *Ptysis*, (πτυνσις) the act of spitting, and *Ptysma*, the sputum. *Ptysmagogue* (αγω, 'to expel;') an expectorant.

PYLĒ (πυλη) *porta*, 'a gate, or door.' Hence, *Pylemphraxis* (εμφράξις, 'obstruction;') an obstruction of the vena portæ. *Pylōrus* (πυλωρος, 'a door-keeper.') The lower orifice of the stomach.

PYON (πυον) PYOS (πυος) 'pus.' Hence, *Pyogenia* (γεννωω, 'I form,') and *Pyōsis* and *Pyopoiēsis* (ποιεω, 'to make.') The formation of pus; suppuration. *Pyothōrax* (θωραξ) 'the chest;' Empyema. *Pyūria* (ουρον, 'urine;') purulent urine.

PYR (πυρ) 'fire;' also fever heat, and fever. *Pyra* (πυρα)

and *Pyrētos* (πυρετος) fever. *Pyrectica*, fevers. [Good.] *Pyretology* (λογος, 'a discourse.') The doctrine of fever. *Pyrexia* (πυρεξια) ('fever;') an attack of fever. *Pyrosis* (πυρωσις, 'burning;') heartburn; water brash.

## R.

**RACHIS** or **RHACHIS** (ραχις) 'a thorn;' the spine. Hence, *Rhachialgia* (αλγος, 'pain;') pain in the back: also, *Colica Pictonum*. *Rhachitis*, inflammation of the spine: also, *Rickets*.

**RAGĒ** or **RHAGĒ** (ραγη) as a suffix, means violent rupture or discharge; as in *Hemorrhagia*, *Menorrhagia*, &c. &c. [See **RHEXIS**.]

**RAX** or **RHAX** (ραξ, genitive ραγος) 'a grape;' *uva*. Hence, *Rhagōdes*, *Rhagoïdes* (ειδος, 'resemblance;') grape-like. The *uvea* is so called.

**RAPHĒ** or **RHAPHĒ** (ραφη) 'a suture;' and *Raphis* or *Rhaphis* (ραφισ) 'a needle.' Hence, *Rhaphiancistron* (αγχιστρον, 'a hook;') an instrument for drawing the iris forward.

**RHACHIS**, see **RACHIS**.

**RHAGĒ**, see **RAGĒ**.

**RHAX**, see **RAX**.

**RHEUMA** (ρευμα) 'a flux,' (ρεω, 'I flow.') Hence, *Rheumatalgia* (αλγος, 'pain;') a rheumatic pain; *Rheumatism*. *Rheumatopyra* (πυρα, 'fever;') rheumatic fever.

**RHEXIS** (ρεξις) 'a tearing away,' 'a rupture.' Like *Rhagē*.

**RHIN**, **RHIS** (ριν, ρις, genitive ρινος) 'the nose.' *Rhinoplasty* (πλασσω, 'I form.') The 'Taliacotian operation.' *Rhinorrhagia* (ραγη, [see **RAGĒ**,]) Epistaxis.

**RHOĒ** (ροη) and **RHŒA**, 'a flux;' a flow; as *Diarrhœa*, *Hæmorrhœa*, &c. &c.

**RHOMBOS** (ρομβος) 'the rhomb,'—a mathematical figure.

Hence, *Rhomboid* (εἶδος, 'shape.') The muscle *Rhomboides*.

## S.

**SALPINX** (σαλπιγξ, genitive σαλπιγγος) 'a trumpet;' the Eustachian trumpet, or tube. Hence, *Salpingemphraxis* (εμφραξις, 'obstruction;') obstruction of the Eustachian tube.

**SAPROS** (σαπρος) 'foul;' of bad odour. Hence, *Saprostömus* (στομα, 'mouth.') One who has an offensive breath.

**SARX** (σαρξ, genitive σαρκος) 'flesh.' Hence, *Sarcōma* (σαρκωμα) 'a fleshy tumour.' *Sarcomatous*, *Sarcomatōdes* (εἶδος, 'resemblance;') flesh-like; fleshy. *Sarcōsis*, the formation of flesh.

**SCAPHĒ** (σκαφη) 'a trough, a dish, a ship.' Hence *Scaphoides*, *Scaphōdes* (εἶδος, 'shape,') dish-shaped, or ship-shaped, as the *os scaphoïdes*, or *os naviculare*.

**SCELOS** (σκελος) 'the leg;' the shin-bone. Hence, *Scelalgia* (αλγος, 'pain;') pain in the leg. *Scelotyrbē* (τυρβη, 'weakness, restlessness;') weakness or tottering of the knees.

**SCIRRHUS** (σχιρῆος) 'hard, indurated;' a tumour of a cancerous hardness. Also, *Scirrḥōma*, *Scirrhocēlē* (ξηλη, 'tumour;') a hard fleshy tumour.

**SCLEROS** (σκληρος) 'dry, hard;' (σκαλλω, 'I dry;' hence *skeleton*.) *Sclerēmia*, *Sclerēmus*, the induration of the cellular tissue of the new-born. *Sclerotica* (*tunica*), the hard coat of the eye.

**SCOPĒ** (σκοπη) **SCOPIA** (σκοπια) **SCOPUS** (σκοπος) 'from σκοπεω, 'I look around.' A common suffix to words, meaning 'view of, inspection;' as *Cranioscopy*: *Stethoscope*, &c.

**SCOTOS** (σκοτος) 'darkness.' Hence, *Scotōdinē*, (δινος, 'vertigo;') vertigo, with darkness before the eyes.

**SCYBĀLON**, (σκυβαλον) 'dung;' also, hard, dried excrement.

**SCYTOS** (σκυτος, κυτος, *cutis*), 'the skin;' leather. Hence,

*Scytitis*, inflammation of the skin. *Scytodephium* (δεφω, 'I moisten;') tannin.

SEMA (σημα) SEMEION (σημειον) 'a sign,' 'a symptom.' Hence, *Semeiology* or *Semiology* (λογος, 'a discourse.') The doctrine of symptoms. *Semeioticē* or *Semioticē*, semiology.

SEPSIS (σηψις) 'putrefaction;' also, SEPĒDON, (σεπεδων) *Septic*, a promoter of putrefaction. *Septopyra* (πυρα, 'fever,') a putrid fever.

SESAMON (σησαμον) 'the seed of the *sesamum*.' Hence, *Sesamoid*, *Sesamoides*, *Sesamōdes* (ειδος, 'resemblance;') sesamum-like; as the *sesamoid bones*.

SIALON (σιαλον) SIĒLON (σιελον) 'saliva.' Hence, *Sialogues* (αγω, 'I expel;') salivants.

SIGMA (σιγμα) 'the old Greek s or c.' Hence, *Sigmatōdes*, *Sigmōdes*, *Sigmoid* (ειδος, 'form;') like the c; semi-lunar in shape;—as the *sigmoid valves*.

SITOS (σιτος) 'food.' Hence, *Sitology* (λογος, 'a discourse.') The doctrine of food.

SŌMA (σωμα) 'body.' A common suffix to words.

SPASMUS (σπασμος) (σπαω, 'to draw up;') 'spasm, cramp.' Hence, *Spasmodic* (ειδος, 'resemblance;') relating to spasm. *Spastic*.

SPERMA (σπερμα) 'sperm, seed.' Hence, *Spermatic*, relating to the sperm. *Spermatopoietic* (ποιεω, 'to make;') sperm making.

SPHACĒLUS (σφακελος) 'mortification.' *Sphaceloid* (ειδος, 'resemblance;') gangrenous.

SPHEN (σφην) 'a wedge.' Hence, *Sphenoid* (ειδος, 'resemblance;') wedge-shaped, as the *sphenoid bone*.

SPHINXIS (σφυγξις) 'the act of binding or constricting.' Hence, *Sphincter*, a constrictor, as the *sphincter ani*. *Sphingonta*, astringents, styptics.

SPHYGMUS, SPHYGMA (σφυγμος, σφυγμη) 'the pulse.'

Hence, *Sphygmoid* (εἶδος, 'likeness;') pulsatile. *Sphygmology* (λογος, 'a discourse.') The doctrine of the pulse. *Sphygmomēter* (μετρον, 'a measure.') A measurer of the pulse.

*SPILOS* (σπιλος,) *SPILOMA* (σπιλωμα) 'a mark;' a mother's mark or *nævus*.

*SPLANCHNA* (σπλαγχνα, 'the viscera;' plural of σπλαγχνον.) Hence, *Splanchnic*, belonging to the viscera. *Splanchnology*, (λογος, 'a discourse.') A treatise on the viscera. *Splanchnica*, disquiet or diseased action in the organs auxiliary to digestion. [GOOD.]

*SPONDYLUS* (σπονδυλος) 'a vertebra.' Hence, *Spondylitis*, inflammation of the vertebræ.

*STAPHYLE* (σταφύλη) 'a grape;' the uvula. Hence, *Staphyloncus* (ογκος, 'swelling;') swelling of the uvula. *Staphylitis*, inflammation of the uvula. *Staphilinus*, belonging to the uvula. *Staphylōma*, a tumour of the eye, likened to a grape. *Staphyloraphy* (ῥαφή, 'a suture,') the suture of the cleft palate.

*STEAR* (στέαρ, genitive στεατος) 'tallow, suet.' Hence, *Stearin*, absolute suet. *Steatōma*, a tumour containing a suety substance.

*STEGNOS* (στεγνος) 'thick; inspissated; drawn together.' Hence, *Stegnotic*, an astringent.

*STENOS* (στενος) 'narrow; strait.' Hence, *Stenocardia* (καρδια, 'the heart,') *angina pectoris*.

*STERNUM* (στερνον) 'the breast bone.' *Sternalgia* (αλγος, 'pain,') *angina pectoris*.

*STETHOS* (στήθος) 'the breast.' Hence, *Stethoscope*, (σκοπεω, 'I view,' 'I examine.') An instrument used in the diagnosis of chest diseases.

*STHENIA* and *STHENOS* (σθένος) 'strength.' Hence *Sthenic*, connected with strength. *Asthenic*, (α, privative) connected with privation of strength.

**STOLE** (στολη, a 'mission.') Hence, *Diastölē* (διαστελλω, 'I dilate;') dilatation of the heart. *Systölē* (συστελλω, 'I contract;') contraction of the heart.

**STOMA** (στομα, genitive στοματος) 'the mouth.' Hence, *Stomatic*, a remedy for the mouth. *Astomia*, (α, privative) the state in which the mouth is wanting.

**STRABUS** (στραβος) 'twisting;' one who squints. *Strabismus*, the act of squinting. *Strabotomy* (τομη, 'incision'). An operation for removing strabismus.

**STRANX** (στραγξ) 'a drop.' Hence, *Strangury* (ουρον, 'urine;') the urine passed by drops.

**STROPHY** (στροφη) 'a turning,' 'a version.' Hence, *Exstrophy* (εξ, 'out.') An eversion, or turning out: extroversion.

**STYLUS** (στυλος) 'a style or pen, a pillar.' Hence, *Styloid*, *Stylodes* (ειδος, 'form; style-like,') as the *styloid process*.

**STYMA** (στυμα) 'priapism.' *Stymatōsis* and *Stymatorrhagia* (ραγη, 'violent discharge.') Bleeding from the penis, when in a state of erection.

**STYPSIS** (στυψις) 'astringency; condensation.' Hence, *Styptic*, an astringent.

**SYCON** (συκον) *figus*, 'a fig.' Hence, *Sycōma*, a tumour like a fig.

**SYM, SYN** (συν) 'with, together:—like the *cum*, *col*, *con*, *cor*, of the Latins. Before *b*, *p*, *ph*, *ps*, and *m*,—*syn* or *xyn* are changed into *sym* or *xym* (*com*): before *c*, *ch*, *g*, *k*, and *x*, into *syn* or *xyn*,—*συγ* or *ξυγ* (*con*): before *l* into *syl* or *xyl* (*col*): before *r* into *syr* or *xyr* (*cor*): and before *s* into *sy* or *xy*, *sys* (*co* and *cos*.) Hence, *Symphysis* (φνω, 'I grow.') A conjunction or union; as well as a bond of union. *Synactica* (αγω, 'I drive;') inspissants. *Synætia* (αιτια, 'a cause,') *concausa*. A fellow cause. *Synanehē*



(αγκω, ‘I choke;’) angina. The same as Cynanche. *Synarthrōsis* (αρθρον, ‘a joint;’) a joint having little or no motion. *Synchondrōsis* (χονδρος, ‘a cartilage;’) a joint by means of cartilage. *Synchondrotomy* (τομη, ‘incision.’) The section of the symphysis pubis. *Synōpē* (κοπεω, ‘I strike;’) fainting. *Syncrasis* (κρασις, ‘a mixture;’) a com-mixture. *Syndesmus* (δεσμος, ‘a ligament;’) a ligamentous union. *Syndesmology* (λογος, a ‘description;’) a description of the ligaments. *Syndesmōsis*, a union by means of ligament. *Synechīa* (εχω, ‘I hold.’) An adhesion between the iris and capsule of the lens, or the cornea. *Synizēsis* (ιζω, ‘I place upon.’) Closure of the pupil. *Synōcha*, and *Synōchus* (εχω, ‘I hold;’) a continued fever. The former has been used for a more inflammatory fever than the latter. *Syssarcōsis* (σαρξ, ‘flesh;’) a union by means of flesh. *Systōle* (στελλω, ‘I send;’) contraction, especially of the heart.

SYRINX (συριγξ, ‘a pipe;’) a fistula. Hence, *Syringōdes* (ειδος, ‘resemblance.’) Fistulous. *Syringōtomy* (τομη, ‘incision.’) The operation for fistula.

## T.

TAXIS (ταξις, ‘order;’) the restoration of order; the restoration of displaced parts,—as in hernia. *Taxiologia* (λογος, ‘a discourse;’) symptomatology.

TECNON (τεκνον, ‘a child.’) Hence, *Tecnoctonia* (κτονος, ‘murder;’) infanticide.

TENON (τενος) ‘a tendon.’ *Tenotomy* (τομη, ‘incision.’) The operation of tendon cutting.

TERAS (τερας, genitive τερατος, ‘a monster.’) Hence, *Teratology* (λογος, ‘a description.’) A description, or the doctrine of monsters.

TETANUS (τετανος,) ‘extended, stretched;’ from τεινω, ‘to

extend.' A disease, characterized by tonic spasms. Hence, *Tetanic*, suffering under, or belonging to, tetanus.

THANĀTOS (θανάτος, 'death.') Hence, *Thanatology*, (λόγος, 'discourse.') The doctrine of death.

THELE (θηλή, 'the female breast; the nipple:') (θάω, 'I milk,' 'I give milk.') *Thelitis*, inflammation of the nipple. *Theloncus* (ογκος, 'tumour,') a tumour of the breast.

THER (θηρ, genitive θηρος,) 'an animal;' 'a wild animal.' Hence, *Thēria* (diminutive) worms in bodies. *Theriaca*, antidotes or counterpoisons. *Theriotomy* (τομή, 'incision;') animal anatomy.

THERAPEIA, THERAPĪA, THERAPEUSIA, THERAPEUTICA, or THERAPEUTICĒ, (from θεραπew, 'I warm,' 'I cherish;') 'service; ministry.' The healing art.

THERMA or THERMĒ (θερμα, genitive θερματος; θερμη) 'heat.' Hence, *Thermæ*, warm springs. *Thermal*, concerning warm springs.

THĒSIS (θεσις, 'a position.') A suffix, denoting 'arrangement.' Hence, *Diathēsis* (δια, 'throughout.') The disposition or habit of the body, or a part of the body.

THORAX (θώραξ, genitive θωρακος,) 'a cuirass;' the chest. Hence, *Thoracica*, pectoral remedies. *Thoracocentēsis* (κεντέω, 'I puncture.') *Paracentēsis thorācis*, *Thoracoscopy*, stethoscopy, percussion, &c.

THROMBUS (θρομβος,) 'a clot of blood.' *Grumus*. *Thrombōsis*. Coagulation of the blood.

THRYPSIS (θρυψις,) 'a breaking, crushing, or rubbing to pieces.' Hence, *Thryptic*, that which breaks to pieces,—as *Lithonthryptic*.

THYMIAMA (θυμιαμα, 'a fumigation.') *Thymiāsis*—'the act of fumigating.' Cure by fumigation.

THYMUS (θυμος, 'the gland, or glandiform body of the thorax;') so called, it has been presumed, from its resemblance to the head of the flower of the Thymus, a kind of leek or

wild onion [?]. *Thymītis*. Inflammation of the Thymus gland.

**THYRA** (θυρα, 'a door.') **THYREOS** (θυρεος,) 'a shield.' In composition, *Thyreo*, and *Thyro*, mean the *Thyroid cartilage*. *Thyroid*, *Thyreōdes*, *Thyreōides* (ειδος, 'resemblance') shield-shaped, as the *Thyroid cartilage*. *Thyreoneus* (ογκος, 'a tumour') a tumour of the thyroid gland. *Goitre*. Also, *Thyreophyma* (φυμα, 'a swelling') and *Thyreocēlē* (κηλη, 'a tumour').

**TOCOS** (τοκος, 'childbirth.') Hence, *Tocology* (λογος, 'a discourse') the art of obstetrics.

**TOMĒ**, **TOMUS** (τομη, τομος, 'incision.') A common suffix,—as in *Lithotomy*, *Bronchotomy*, &c. *Tomotōcia* (τοκος, 'parturition') the Cæsarean section.

**TONUS** (τονος,) 'tone,' (τεινω, 'I stretch') a state of tension proper to each organic texture. Hence, *Tonic*, that which gives tone; and *Tonicity*, the faculty that determines the general tone.

**TOPOS**, **TOPUS** (τοπος, 'a place.') *Topical*, local. *Topographical* (γραφη, 'description') describing places or regions. Hence, *topographical anatomy*.

**TOXA** (τοξα, the plural of τοξον, 'a bow,' 'an arrow.') Hence, *Toxicum*, (τοξικον, 'a poison;') formerly a poison for arrows. *Toxicology* (λογος, 'a discourse') a treatise on poisons.

**TRACHIYS** (τραχυς,) 'rough, uneven.' Hence, *Trachēa*, (τραχεια αρτερια) the windpipe. *Tracheītis*, inflammation of the windpipe; croup. *Trachēlus* (τραχηλος) the neck: both it and *trachea* are so called, on account of the roughness of the cartilages and cervical processes.

**TRAGUS** (τραγος, 'the buck-goat.') The odour of the armpits; also, the anterior cartilage of the ear. *Tragīcus*, a muscle of the tragus of the ear.

**TRAPĒZA** (τραπεζα, 'a table.') Hence, *Trapezium*—the

four-sided figure; and the muscle *Trapezius*, so called from its shape. *Trapezōdes* or *trapezoïdes* (εἶδος, 'resemblance') a name given to the anterior portion of the *Ligamentum coraco-claviculare*; and to the second bone of the second row of the carpus.

**TRAUMA** (τравμα, 'a wound.') Hence, *Traumatic*; belonging to a wound.

**TREMA** (τρημα,) (τρηω, 'I bore') 'a hole or foramen.' *Trēsis* (τρῆσις) the act of boring or perforating. *Atresia* (α, privative) the state of being imperforate, or of having no aperture, where one ought to exist. *Trepānum* or *Trypānum* (τρυπανον) the trepan; (or from τρεπω, 'to turn.')

**TRI** (τρι) in composition, 'three.' Hence, *Triorchis*, (τριorchis, orchis, 'a testicle') one who has three testicles. *Trisplanchnic* (σπλαγχνον, 'a viscus') the great sympathetic; so called, because distributed to the three splanchnic cavities. *Trisplanchnia*, the Asiatic cholera.

**TRICHES** (τριχες; plural of τριξ, genitive τριχος, 'the hair.') Hence, *Trichiasis*, a disease of the hair. *Trichismus*, a splitting of the hair; *Fissura pilaris*. *Tricocephalus* (κεφαλη, 'head') and *Trichūris* (ουρα, 'a tail') a hair-worm; hair-tailed. *Trichonōsi* (νοσος, 'a disease') diseases of the hair.

**TRIPSIS** (τριψις, 'rubbing; friction.') See **THRYPSIS**. From τριβω, 'I rub.' Hence, also, *Trisis* (τρισις, 'rubbing or grinding of the teeth;') and *Trismus* (τρισμος, 'lock-jaw.')

**TRITOS**, (τριτος, 'the third.') As *Tritoxide*, an oxide of the third degree.

**TROCHUS** (τροχος, 'a wheel,') from τρεχω, 'to run; to make run.' Hence, *Trochanter*, (τροχαντηρ, 'a runner;') two prominences on the thigh bone are so called. *Trochanteric*, belonging to the trochanter. *Trochantinian*, belonging to the lesser trochanter or *trochantin*. [CHAUSSIER.] *Trochī-*

*ter*, the larger of the tubercles of the os humeri. *Trochin*, the lesser of the two. [CHAUSSIER.] *Troche*, a lozenge of a circular shape. *Trochlēa* (τροχαλία) a pulley, and *Trochlearis*, the pulley-muscle of the eye. *Epitrochlea* (ἐπι, upon) the inner condyle of the os humeri. [CHAUSSIER.]

**TROPHĒ** (τροφῆ) ‘nourishment.’ Hence, *Atrōphy*, wasting. *Hypertrophy*; super-nutrition, &c. *Trophonōsi* (νοσος, ‘a disease’) diseases of nutrition.

**TYLUS**, **TYLOS** (τυλος) *Callus*; thickening of the cuticle. Hence, *Tylōma*, callosity of the hands or feet.

**TYMPANUM** (τυμπανον, ‘a drum,’) the drum of the ear. *Tympanites*, *Tympany*, a disease in which the abdomen is distended with air, and sounds like a drum. Hence, *Tympanitic*, belonging to, or resembling, tympanites.

**TYPHLOS**, **TYPHLUS**, (τυφλος, ‘blind.’) *Typhlitis* (itis, a suffix denoting inflammation. Inflammation of the cæcum, or blind gut. *Typhlōsis* and *Typhlōtes*, blindness.

**TYPHUS** (τυφος, ‘smoke.’) A fever, accompanied with cloudiness of the intellect. (?) *Typhoid* (ειδος, ‘resemblance;’) resembling typhus. *Typhomania*, violent delirium, with alternation of stupor.

**TYRBĒ** (τυρβη) (τυρβω, ‘I disturb;’) restlessness, disorder. (See **SCELOTYRBĒ**.)

**TYROS** (τυρος, ‘cheese.’) *Tyremēsis* (εμεω, ‘to vomit,’) and *Tyrōsis*: the vomiting of curd, by children. *Tyrōma*, a cheesy tumour.

## U.

**ULE** (ουλη, ‘a cicatrix,’) (ουλος, ‘solid, whole.’) Perhaps from this comes *Ulon* (ουλον) the gum. *Ulitis*, inflammation of the gum. *Uloncus* (ογκος, ‘swelling;’) a swelling of the gum. *Ulotica*, medicines that favour cicatrization.

**URANISCOS** (ουρανισκος, ‘the roof of the mouth.’) *Uranis-*

coplasty (πλαστικος, 'forming.') Operation for supplying defects of the soft palate.

URON (ουρον, 'urine.') Hence, *Urachus* (ουραχος, ουραγος) (εχο, 'I hold;' or αγω, 'I expel.') A canal for the urine. *Urēsis* (ουρησις) the voiding of urine. *Urēter* (ουρητηρ) a channel for the urine from the kidney. *Ureteritis*, inflammation of the ureter. *Urēthra* (ουρηθρα) the canal for the discharge of the urine from the bladder. *Urethritis*, inflammation of the urethra. *Urethrorrhagia* (ραγη, 'a violent discharge;') hemorrhage from the urethra. *Uretic*, a diuretic. *Urocystis* (κυστις, 'a bladder;') the urinary bladder. *Urolithus* (λιθος, 'a stone;') a urinary calculus. *Uromantia* (μαντεια, 'divination;') divination by the urine. *Uroscopy* (σκοπω, 'I examine;') investigation of the urine.

URUS, URIS (ουρα, 'a tail.') Hence, *Hippūris* (ιππος, 'a horse;') horse-tail; the *cauda equina*. *Oxyūris* (οξυς, 'sharp;') sharp-tailed; the ascaris vermicularis. *Trichūris* (τριχς, τριχος, 'hair;') hair-tailed; the long thread worm.

## X.

XEROS (ξηρος and ξερος, 'dry; hard.') Hence, *Xeransis* (ξηρανσις), *Xerasia* (ξηρασια), and *Xerasmus* (ξηρασμος) dryness, as of the hair. *Xerophthalmia* (οφθαλμια, 'inflammation of the eye;') ophthalmia, without discharge. *Xerotri-bia*, (ξηροτριβια) and *Xerotripsis* (τριβω, 'I rub;') dry rubbing.

XIPHOS (ξιφος), 'a sword.' Hence, *Xiphoid*, *Xiphoïdes*; *Xiphōdes* (ειδς, 'resemblance;') sword-like, as the *Xiphoid* or *ensiform cartilage*.

## Z.

ZEMA (ζεμα), 'a decoction;' also, *Apozem*. (ζέω, 'to boil.')



*Zesis*, coction, and decoction. *Zestos* (ζεστος, 'boiled.') *Zestolusia* (λουω, 'to wash;') the hot-bath.

*Zōmos* (ζωμος, 'broth or soup.') Hence, *Osmazome* or *Osmozome* (οσμη, 'smell.') A proximate principle, which gives the flavour of meat to soups.

*Zōon* (ζωον, 'an animal.') Hence, *Zoochemia*, animal chemistry. *Zoodynamia* (δυναμις, 'power;') the animal or vital force. *Zoology* (λογος, 'a discourse;') the science of animals. *Zoonomia* (νομος, 'a law;') the laws of animal life. *Zoophyte* (φυτον, 'a vegetable;') one of the lowest classes of animals, closely approximating to the vegetable. *Zootomy* (τομη, 'incision;') the anatomy of animals.

*Zygos* (ζυγος, *jugum*,) 'a yoke.' Hence, *Zygōma*, the malar or cheek-bone; and *Zygomatic*, belonging to the cheek-bone,—as *zygomatic arch*, *zygomatic process*, &c.

The nomenclature of anatomy has been a subject of complaint in all times. Having had no fixed principles in its formation, it is extremely difficult for the student to attain. It is encumbered, too, unnecessarily, with forms of expression, that are any thing but concise; and on that account has drawn upon it the censures, not only of the amateur, who may be desirous of making himself acquainted with the different organs of the human body, but also of anatomical writers themselves. As regards the names of various organs, it may be difficult, and perhaps unadvisable, to change such as have been applied to them for ages,—whimsical as the causes of such appellations may have been; but the labours of the student might be greatly facilitated, were the anatomists of the day,—in the case of muscles, nerves, &c., which proceed from one part of the economy to another,—to adhere to the kind of

nomenclature, for example, proposed by Dumas and Chaussier,—or to any other based on similar principles. Some of the muscles, indeed, are thus designated in the nomenclature—or rather, in the names—generally adopted; they are few, however, yet they are sufficient to occasion the student deep regret, that the plan has not been followed throughout.

Taking the muscles by way of elucidation, the student will soon discover, that the most heterogeneous reasons have swayed the anatomist in his selection of names. *First. Uses.* Thus we have *diaphragm* ('a partition.') *Buccinator* (*buccinare*, 'to sound a trumpet.') *Extensors*, *flexors*, *abductors*, *adductors*, *levators*, *depressors*, &c.

*Secondly. Position;* as *Interspinales* (between the spines of the vertebræ.) *Interossei*, *subclavius* (*clavis*, 'the clavicle.') *Popliteus* (*poples*, 'the ham.') *Anconæus*, (see ANCON, in the vocabulary.) *Cubitalis*, (*cubitus*, 'the elbow;' also one of the bones of the fore-arm.) *Iliacus*; *temporalis* (*tempus*, 'the temple,') &c. &c.

*Thirdly. Shape;* as *Trapezius*, (see TRAPEZA, in the vocabulary.) *Splenius* ('like a spleen.') *Lumbricales* (*lumbricus*, 'an earth worm.') *Serrati* (*serra*, 'a saw.') *Digastric* ('double bellied,') (see DI, in the vocabulary.) *Deltoid* ('delta shaped,') (see DELTA, in the vocabulary.) *Scalenus* (*σκαληνος*, 'irregular,' 'unequal.') *Rhomboides* (see RHOMBOS, in the vocabulary, &c. &c.)

*Fourthly. Dimension;* as *pectoralis major*; *rectus capitis anticus major*. *Glutæus*—*maximus*, *minimus*, *medius*, &c.

*Fifthly. Direction;* as *Obliquus abdominis*; *Transver-*

*salis abdominis; Rectus femoris; Rectus abdominis, &c. &c.*

*Sixthly. Composition; as Semi-membranosus; semitendinosus; complexus, &c. &c.*

*Seventhly. Attachment; as sterno-cleido-mastoideus*—according to the different points of the skeleton, with which they are connected by means of tendons or aponeuroses. Thus—in the case of the muscle just mentioned—the name indicates, that it is attached to the sternum, clavicle (see the vocabulary, under *CLEIS*) and mastoid process of the temporal bone,—or, according to common expression, that the muscle arises from the sternum and clavicle, and is inserted into the mastoid process. This is the principle on which the nomenclature of Chaussier is founded, and it is good,—inasmuch as, when the student has attained the name of the muscle, it suggests the seat, and likewise the use; for the main action of a muscle is back from its insertion towards its origin. The sterno-cleido-mastoideus, when it contracts, has its fibres drawn towards the sternum and clavicle; and, of course, the head, of which the mastoid process forms part, is moved. The order of contraction is, however, reversed occasionally, so that the origin and insertion, so far as regards their physiological action, change places. Thus, the deltoid muscle, as it is usually called,—the *infra-acromio-humeralis* of Chaussier,—issues, as the latter appellation imports, from below the acromion process of the scapula, and is inserted into the os humeri. When the muscle contracts, in its usual direction, the os humeri is moved by it, as when we raise a weight; but if the body be in the recumbent posture, and the individual attempt to

raise himself, by laying hold of a rope or cross-bar above him, then the muscle contracts towards the humeral attachment, and the scapula and body are elevated.

The value of this kind of nomenclature will be readily apprehended, if we cast our eye over any table of muscles, in which the old, and the new names proposed by Chaussier, are placed in juxtaposition. Valid objections may, indeed, be urged against some of the names of the French anatomist, but as his nomenclature is followed by many, it might be as well, perhaps, to adopt it without modification.

OLD NAMES.	NEW NAMES.
Orbicularis palpebrarum.	<i>Naso-palpebralis.</i>
Corrugator supercilii.	<i>Fronto-superciliaris.</i>
Buccinator.	<i>Alveolo-labialis.</i>
Masseter.	<i>Zygomato-maxillaris.</i>
Temporalis.	<i>Temporo-maxillaris.</i>
Platysma-myodes.	<i>Thoraco-facialis.</i>
Psoas magnus.	<i>Prælumbo-trochanterianus.</i>
Psoas parvus.	<i>Prælumbo-pubianus.</i>
Latissimus dorsi.	<i>Lumbo-humeralis.</i>
Sphincter ani.	<i>Coccygeo-analis.</i>
Biceps flexor cubiti.	<i>Scapulo-radialis.</i>
Brachialis internus.	<i>Humero-cubitalis.</i>
Sartorius.	<i>Ilio-prætibialis.</i>
Gracilis.	<i>Infra-pubio-prætibialis.</i>

Allusion has already been made to the improvement introduced into chemistry, by the adoption of the nomenclature, which has been generally termed ‘Lavoisierian;’ the credit of which ought, however, to be divided between that distinguished chemist, and his able coadjutors, Berthollet, Guyton de Morveau, and Four-

croy. But, subject as the views of the chemist are to change, in consequence of the discoveries,—ever and anon made,—of the composition of bodies, the nomenclature of chemistry will have to vary, in order to keep pace with the progress of the science. Thirty years ago, oxygen, as its name imports, (see the Glossary,) was esteemed the great acidifying principle, whilst the alkalies were looked upon as simple bodies, and as antitheses to the acids. The chemical analyst has since then shown, that acids may be formed without oxygen, and that the alkalies—potassa and soda, for example—are compounds of oxygen with a metallic base. The erroneous idea of oxygen being the general acidifying principle—as Dr. Turner has remarked—has exercised an injurious influence over the whole structure. “But it is now too late,” he adds, “to attempt a change; for the confusion, attending such an innovation, would more than counterbalance its advantages. The original nomenclature has therefore been preserved, and such additions have been made to it as the progress of the science rendered necessary. The most essential improvement was suggested by the discovery of the laws of chemical combination. The different salts, formed of the same constituents, were formerly divided into *neutral*, *super* and *subs*alts. They were called *neutral*, if the acid and alkali were in such proportion that one neutralized the other: *super-salts*, if the acid prevailed; and *sub-salts*, if the alkali was in excess. The name is now regulated by the atomic constitution of the salt. If it is a compound of an equivalent of the acid and the alkali, the generic name of the salt is employed without any other addition; but if two

or more equivalents of the acid are attached to one of the base, or two or more equivalents of the base to one of the acid, a numeral is prefixed so as to indicate its composition. The two salts of sulphuric acid and potassa are called sulphate, and *bisulphate*; the first containing an equivalent of the acid and the alkali; and the second salt, two of the former to one of the latter. The three salts of oxalic acid and potassa are termed the oxalate, *binoxalate* and *quadroxalate* of potassa, because one equivalent of the alkali is united with one equivalent of acid in the first, with two in the second, and with four in the third salt." (Elements of Chemistry, &c., by Edward Turner, M. D., &c. Fifth American by Dr. Baché from the fifth London edition, p. 124.)

It would be useless—as it would be unintelligible—to the student, to attempt here an explanation of the whole system of chemical nomenclature. To comprehend it requires some acquaintance with the first principles of the science; yet, in many—it may be said in most—cases, the foundation of the nomenclature is sufficiently simple. Formerly, as has been observed, all *acids* were conceived to contain oxygen as the acidifying principle; but if they did not hold oxygen enough to give them the acid character, they were termed *oxides*. The substance, acidified by the oxygen, gave the name to the acid,—*ic* being added. Sulphuric acid, for example, is a compound of sulphur and oxygen. But if different acids were formed by a substance with different doses of oxygen, then the termination was modified; the one with the larger dose of oxygen having the ending in *ic*, whilst the other was made to end in *ous*. Hence, we have the sulphuric and the



sulphurous acids. Subsequently, an acid compound of sulphur was discovered which contained a less proportion of oxygen than sulphurous acid. It was therefore named hyposulphurous acid (from  $\upsilon\pi\omicron$ , 'under.') The prefix hyper ( $\upsilon\pi\epsilon\rho$ , 'over,' or 'in excess') denotes that an acid compound has a larger proportion of oxygen;—for example, in the hyperchloric acid, the proportion of oxygen is greater than in chloric acid.

Certain substances, again, as cyanogen, chlorine, and sulphur form acids with hydrogen, hence termed hydracids. The hydrocyanic, hydrochloric, and hydrosulphuric acids are compounds of this kind. Of late, these have been named by many chemists, on the suggestion of M. Thénard, cyanhydric or cyanohydric, chlorhydric or chlorohydric, and sulphhydric or sulphohydric acids.

The above course has not been abandoned, although the different degrees of oxidation are now generally distinguished by prefixes from the Greek or Latin. Thus, *protoxide* ( $\pi\rho\omega\tau\omicron\varsigma$ , 'first,') denotes the first degree of oxidation; *deutoxide* ( $\delta\epsilon\upsilon\tau\epsilon\rho\omicron\varsigma$ , 'the second,') or *bin-oxide*, the second; and *tritoxide* ( $\tau\rho\iota\tau\omicron\varsigma$ , 'the third,') or *teroxide*, the third. *Peroxide* is often applied to the highest degree of oxidation.

Compounds, that consist of acids combined with metallic oxides or alkaline bases, are termed *salts*, and the names are so formed as to indicate the substances contained in them. If the name of the acid ends in *ic*, that of the salt ends in *ate*. Hence, sulphate of potassa consists of the base potassa with sulphuric acid. On the other hand, if the name of the acid ends in *ous*, that of the salt ends in *ite*. The *sulphite*

of potassa is a composition of sulphurous acid and potassa.

In all this, there is system; but the rage for supererogatory nomenclature prevails also here; and many innovations are constantly made, to the confusion of the student, without any marked advantage to science. It would be comparatively well did the evil stop here. The rage has extended to the adoption of a style and manner, which is vicious in the extreme, and is too much based on the pleonastic style of some of the modern writers of France and Germany. It has been properly remarked by Sir Charles Bell, that although medical men may use a foreign or dead language with propriety, they should avoid a peculiarity of style and phrase, which no one can understand, unless he is initiated, and has studied the science itself so intensely, that he has also learned the jargon in which it is conveyed. He observes, "that no one but a thorough anatomist can understand the adulterated language of anatomy, nor can he understand it without some labour; for anatomists have buried their science under the rubbish of names; and there is not a difficult or hard-sounding word, upon which they have the least pretence of claim, that they have not retained; they have choked their subject with useless minutiae; they have polluted their language by transferring to it from the Latin many words, which, by their continual inflections in that language, were beautiful, while their unvaried, uncouth termination in ours is barbarous in the utterance, and tends but to interrupt and puzzle the sense: they have impressed into the service of their science a great many poor words, which would get

their *habeas corpus* from any court in Christendom.” “Thus,”—he continues, (‘Anatomy, &c.,’ vol. 2, ii., Introduction, xxiv.)—“an anatomist will describe an artery as ‘going to the radial edge of the second metacarpal bone; then supplying the abductor and flexor muscles; then going along the bone of the first phalange, seated upon this second metacarpal bone,’ with many other distortions, ambiguities, and little contrivances, to conceal (as one would believe) that he is describing so simple a matter as the *artery of the forefinger*, which the reader at last finds out, either by some lucky chance, or by reflecting how many metacarpal bones there are, and then reckoning them first forwards, and then backwards, that he may be sure which it is that the author means; for his author may count from the little finger towards the thumb; or from the thumb towards the little finger; or he may have a fancy of leaving out the thumb, and reckoning only four.” “What,”—adds Sir Charles,—“must be the surprise of any well educated young man, when he reads in those books, which he must, of the *regions* of the *elbow*, or *thumb*, or *forefinger*? And if an anatomist understand such things with difficulty, how distressing must they be to the student.” And he concludes:—“‘This is the scholastic jargon, which has so long been the pride of anatomists, and the disgrace of their science, which has given young men a dislike for the most useful of all their studies, and which it is now full time to banish from our schools. These are the authors, who avoid plainness as if it were meanness; who are studious of hard words, as if they constituted the

perfection of science: 'it is their trade, it is their mystery to write obscurely;' and full sorely does the student feel it."

A similar difficulty is experienced by the student in the investigation of disease, from the careless use of unmeaning terms, or rather of terms which convey no precise idea to his mind. Thus, we constantly hear of a person's being 'bilious,' and of an article of diet being 'bilious,'—the idea intended to be conveyed being, that the person is dyspeptic, or the diet difficult of digestion; and as the bile has, in modern times, been esteemed a great cause of indigestion, the epithet 'bilious' has been thus employed. It has been properly remarked by Dr. Abercrombie,—('Inquiries concerning the Intellectual Powers,' &c. Amer. edit. p. 329,)—that "if we would contribute something towards diminishing the uncertainty of medical researches, and introducing a greater degree of precision into medical reasoning, there are certain rules, which we ought to keep steadily in view, both in conducting our own inquiries, and examining the investigations of others;" and that an important rule is to endeavour to have all our terms fully defined. "If we speak, for example, of a person being bilious, or labouring under biliary derangement, or derangement of the chylopoietic viscera, let it be explained what particular condition of the biliary or digestive organs we mean to express by these terms; or if this cannot be done, let it at least be clearly understood what particular symptoms we include under them." "If," he adds, "they were defined in this manner, they would be merely names, and no harm could result from the use of them, but, as the

are frequently employed, they seem to have no explicit signification."

In prescribing, a mode of expression is employed, which, although conveyed in the Latin language, requires attention even on the part of those whose academical education has been properly directed. Some acquaintance with the language of prescriptions is, therefore, indispensable, should the physician, with whom the student is placed, be in the habit of having his prescriptions prepared in his own office; and, especially, if he be in the habit of writing his prescriptions in the mode universally adopted by the physicians, and even by the apothecaries, of Great Britain. Mr. Chamberlaine ('*Tirocinium Medicum*,' p. 96,) has given the following specimen of the Prescription Book of the English general practitioner which may be taken as a correct illustration of the mode in which the diary of his proceedings is usually kept.

"*Die Lunæ, 15to Januarii, 1813.*

*Pitt, Mrs.*

Repetantur Haust.\* iij.† ut heri.

*Hewitt, Mrs.*

Repr.‡ Mistura.

Repr. Haustus anodyn. horâ somni sumendus.

*Leonard's Child.*

R—Ung.§ Cetacei ȳj.¶

Repetantur pulveres ut die Veneris ultimo præscr."¶¶

The practitioner, when he returns from paying his

\* Haustus.

† Tres.

‡ Repetatur.

§ Unguenti.

¶ Unciam.

¶¶ Præscripti.

visits, enters the prescriptions in his book, as above; and this is the guidance to the assistant or the apprentice in his office, whose duty it is to prepare, and send out, the medicines.—Mrs. Pitt is to have the three draughts as yesterday.—Mrs. Hewitt is to have a repetition of the mixture; and the anodyne draught, to be taken at bed-time, is to be repeated.—Leonard's child is to have an ounce of the ointment of spermaceti; and a repetition of the powders prescribed last Friday.

The prescriptions of the physician are issued in a similar style, of which the following may be taken as a sample.

R.—Infus. columb.  $\mathfrak{z}$ iss.  
 Tinct. gent. comp.  $\mathfrak{z}$ j.  
 Syrup, cort. Aurant.  $\mathfrak{z}$ ij.  
 Tinct. capsic. gtt. xl. (vel m. xxx.)  
 Capiat coch. ij. p. r. n. M.

R. D.

1mo. Martii,

1837.

*John Smith, Esq.*

This, when written at length, will read as follows—

Recipe.—Infusi columbæ, sesquiunciam, (vel unciam cum semisse.)

Tincturæ gentianæ compositæ, drachmam;

Syrupi corticis aurantiorum, drachmas duas;

Tincturæ capsici, guttas quadraginta, (vel minima triginta,) Misce.

Capiat cochlearia duo pro re natâ.

There are several points, in these brief examples, which, to the tyro, require explanation.



In the *first* place, it will be observed, a character, bearing the appearance of the letter R, but having—what Dr. Paris has termed—a ‘*cloven foot*,’ is placed at the head of every formula. This is now universally—a representative of the Latin word ‘*Recipe* ;’ and is always so rendered. Originally, however, it was not so. It is a relic of ancient superstition, and, like many such relics, has had its functions so modified as to leave scarcely a vestige of its former appropriation. The symbol, in question, is the old astrological sign for Jupiter, ♃, and it was, anciently, placed at the head of the prescription, to invoke the aid of the god of thunder in its operation.

*Secondly.* It rarely happens, that the different components of a prescription have their names written at full length. Thus, we have, in the last of the prescriptions, *Infus. Columb.*, *Tinct. Gent. comp.*, *Syrup. cort. Aurant.*, *Tinct. Capsic.*, &c. This plan has, doubtless, been adopted to save the time of the practitioner: no other good reason can be assigned for it.

There is no invariable rule adopted by prescribers in this matter. Sometimes those very articles will be written *Inf. Columb.*; *Tinctur.* or *T. Gentian. c.*; *Syr. cort. Aur.*; *Tinctur.* or *T. Caps.*, &c. &c.

It has been urged against the use of abbreviations, that mistakes may arise, in consequence of the great similarity between the abridged names of certain articles; but it cannot often happen that serious risk of this kind can be incurred. If the prescriber exerts ordinary caution, the merest tyro can comprehend his directions. There are some newly introduced agents, how-

ever, which demand great care inasmuch as they are the *active* principles of *active* remedies, and a mistake in compounding them might be followed by serious consequences. In the second edition of a translation of Magendie's "*Formulaire pour la preparation et l'emploi de plusieurs nouveaux medicamens,*" by the author's friend and preceptor,—the late Charles Thomas Haden, Esq.,—the author of this work advised the ending in *ina*, in the case of several of the newly discovered active principles of vegetable substances, inasmuch as errors would be less likely to arise, from the greater dissimilarity between the terminations of the name of the plant and its base, than when any other of the names that have been proposed are employed. Thus, the terms *Cinchonia*, *Veratria*, *Solania*, and *Atropia* are so similar to those of the plants of which they are the bases, that if the words were abridged in a prescription, the occurrence of many mistakes might be apprehended. Besides, *Morphina*, and *Emetina*, admitted into the pharmacopœia of Paris, had been latinised according to the plan recommended. The custom, however, generally prevails of making the alkaloids end in *ia*, as *quinia*, and *morphia*: and the neutrals in *in*, as *piperin*.

In another work, (A Dictionary of Medical Science and Literature, &c. 4th edit. Philad. 1844.) the author has given a table of the chief abbreviations that are used in medicinal formulæ. They are by no means as frequently employed at the present day as they were formerly. Of old, every article of the

materia medica had its appropriate symbol; but the era of darkness has almost passed away, and most of the old chemical, astrological and other signs are now disregarded, except as indexes of a by-gone period of ignorance and superstition.

The abbreviations, generally used at the present day, sufficiently indicate the words which they represent. We still, however, meet with a few, that require a glossary:—for example, A or āā (ana) *ana* ‘of each ingredient.’ BB. *Bbds. Barbadosensis*, ‘Barbadoes.’ C. C., *Cornu Cervi*, ‘hartshorn.’ C. C. u., *Cornu cervi ustum*, ‘burnt hartshorn.’ C. m., *Cras manè*, ‘to-morrow morning.’ *De d. in d.*, *De die in diem*, ‘from day to day.’ F. *fiat*, ‘let it be made;’ as *f. pil.*,—*fiat pilula*, ‘make into a pill.’ F. VS., *Fiat venæsectio*, ‘let bleeding be performed.’ G. g. g., *gummi guttæ Gambiæ*, ‘Gamboge.’ H. s., *Horâ somni*, ‘at the hour of sleep;’—‘at bed time.’ H. s. s., *Horâ somni sumendus*, ‘to be taken at bed time.’ M. or m̄, *Misce*, ‘mix.’ N. M., *Nux moschata*, ‘nutmeg.’ Ol. s. i., *Oleum sine igne*, ‘oil prepared without fire;’ as *Ol. lini s. i.*, ‘cold-drawn linseed or flaxseed oil.’ O. O. o., *Oleum olivæ optimum*, ‘best olive oil.’ P., *Pondere*, ‘by weight.’ P. and Pug., *Pugillus*, ‘a pugil.’ P. æ., *Partes æquales*, ‘equal parts.’ P. P., *Pulvis Patrum*, ‘Jesuit’s bark.’ P. r. n., *pro re natâ*, ‘as occasion may arise.’ Q. p., *Quantum placeat*, ‘as much as may please.’ Q. s., *Quantum sufficiat* or *sufficit*, ‘as much as may suffice, or suffices.’ Q. v., *Quantum volueris*, ‘as much as you wish.’ S. a., *secundum artem*, ‘according to the rules of art.’ S. V., *Spiritus vini*, ‘spirit of wine.’ S. V. r., *Spiritus vini rectificatus*, ‘rectified spi-

rit of wine.' *S. V. t.*, *Spiritus vini tenuior*, 'proof spirit of wine.' *T. O.*, *Tinctura opii*, 'tincture of opium,' 'laudanum.' *TR.* and *T* *Tinctura*, 'tincture.' *V. o. s.*, *Vitello ovi solutus*, 'dissolved in the yolk of egg.' *ZZ.*, formerly 'myrrh,' now *Zinziber*, 'ginger.'

*Thirdly.* Particular hieroglyphics are usually employed to mark the quantities of the different articles in a prescription. Thus,  $\text{℥}$ , *libra*, is a pound;  $\text{℥}$ , *uncia*, an ounce;  $\text{℥}$ , *drachma*, a drachm;  $\text{℥}$ , *scrupulum*, a scruple; gr., *granum*, a grain; O., *octarius*, a pint: f., prefixed to the symbol for the ounce and drachm, means an ounce or a drachm by measure,—'a fluidounce,' *fluiduncia*, or 'fluidrachm,' *fluidrachma*.  $\text{℥}$  signifies *minimum*, the least or sixtieth part of a fluidrachm; gtt., *gutta*, 'a drop;' ss., *semissis*, or half; iss., one and a half; j., one; ij., two; iij., three; iv., four; x., ten; xij., twelve, &c. &c.

To this kind of symbolic language great objection has been made, and not without apparent foundation. It has been affirmed, for example, that a physician's prescription should be intelligible to all who can read, and so clear, that the nurse, who attends the sick, may know its import; that the quantities should be written in words, and not in the usual characters; for, suppose—it is urged—in the case of some powerful medicines, in the hurried way of almost all affected bad writing, in prescriptions, there should be an extra z, at the top of the symbol for a drachm; or, in other words, there should be an  $\text{℥}$  (ounce) instead of a  $\text{℥}$  (drachm,)—the latter being only the eighth part of the ounce,—how fatal might be the consequences! It, doubtless, would

be better, that these symbols should not be used in extemporaneous formulæ, yet a very ordinary degree of attention, on the part of the prescriber, or the compounder, will be sufficient to prevent mistakes.

As regards the weights and measures, used by the apothecary in compounding, it is only necessary to refer the student to his 'Dispensatory.' (See, also, the article 'Weights and measures,' in the author's 'Dictionary.') The importance of possessing a uniform system of weights and measures has impressed the scientific of all countries, and numerous endeavours have been made to accomplish the object. It is, however, a matter of much difficulty, and not likely to be easily effected. The new French measures are upon decidedly the best footing, but they are not adopted out of France. They are not used, indeed, universally in it.

The weight, by which the apothecary buys his drugs, is the *avoirdupois*: that, by which he compounds, is a modification of the *troy*,—called *apothecaries' weight*. The last two correspond with each other in pounds, ounces and grains; but they differ in the division of the ounce, which, in the troy weight, contains twenty pennyweights, each pennyweight weighing twenty-four grains; whilst, in the apothecaries' weight, the ounce is divided into eight drachms,—each drachm into three scruples;—and each scruple into twenty grains.

It has been remarked above, that the French do not always employ the weights of modern introduction. They usually adhere to the *poids de marc*, which differs again from both the troy or apothecaries, and the *avoirdupois*. The subdivisions, however, resemble

those of the last. The relative values of the old French—the *poids de marc*, and the English or troy—are as follows:—

Poids de marc.	Troy weight.	Troy grains.
1 pound, lb	= 1.31268	= 7561.
The ounce, $\bar{3}$	= .984504	= 472.5625
The <i>gros</i> or drachm, $\mathfrak{z}$	= .984504	= 59.070312
The grain, gr.	=	= .820421

Troy.	Poids de marc.	French grains.
1 Pound,	= 0.76180	= 7561.
The ounce,	= 1.01574	= 585.083
The drachm,	= 1.01574	= 73.135
The grain,	=	= 1.219

The difference between the French and the English grain has, therefore, to be borne in the mind. In the case of very active remedies, the adoption of the grain troy for the grain *poids de marc* might be the source of inconvenience. Thus, in the 'Formulary' to which allusion has been made, the weights of the ingredients in the different formulæ are given in French grains. In that, for example, for the *Gouttes calmantes*—the '*Guttæ anodynæ*' or 'anodyne drops,' of the translation—*sixteen grains* of the acetate of morphia are directed to the *ounce* of distilled water. These, in the troy computation, are  $13\frac{1}{9}$  grains; and seven drachms,  $52\frac{1}{2}$  grains, respectively.

Again, in the *Sirap de quinine*, or 'syrup of quinia,' the computation of the ingredients in the *poids de marc*, and the troy, is as follows:—



Simple syrup,	2 pounds (31 oz. 4 dr. 2 gr. Troy.)
Sulphate of quinia,	64 grains (gr. 52.48 Troy.)

If, then, in this formula, the compounder were to read two pounds *troy*, instead of two pounds *poids de marc*, the difference would be great,—two pounds troy being 24 troy ounces, whilst two pounds, *poids de marc*, are upwards of  $31\frac{1}{2}$  ounces.

To convert the *poids de marc* grains into troy grains, it is but necessary to divide by 1.219; and to convert troy grains into French grains, to multiply by the same.

The measures of capacity in use with the apothecary are sufficiently simple. Formerly, *libra* was used for the pint, and the symbol  $\mathfrak{f}\mathfrak{f}$ . was adopted to express both a pound by weight, and a pint by measure. Different liquids, however, are of different specific gravity, and, therefore, the London College of Physicians suggested the term *octarius* and the symbol O for the pint, —*libra* being restricted to the pound by weight. In like manner, *gutta* was formerly used universally for the smallest division of the measures of capacity: but the drop varies materially in weight, as well as in dimensions, according to the nature of the fluid, and the thickness of the lip of the phial from which it may be dropped. Accordingly, the same college suggested a division of the fluid drachm into 60 equal parts, and proposed, for each of these, the name *minimum* or *minim*. Both suggestions have been embraced by the framers of the Pharmacopœia of the United States. The following is the apothecaries' or wine measure, adopted in it as well as the Dublin Pharmacopœia.

The gallon ( <i>Congius</i> ),	}	contains	{	8 pints,
The pint ( <i>Octarius</i> ), O,				16 fluidounces,
The fluidounce ( <i>fluiduncia</i> ), f. $\frac{z}{3}$ ,				8 fluidrachms,
The fluidrachm ( <i>fluidrachma</i> ), f. $\frac{3}{3}$ ,				60 minims.
The minim ( <i>minimum</i> ), $\mathfrak{m}$ .				

It must be borne in mind, however, by the student, when he is perusing an English work, that whilst the pharmacopœia of the United States and that of Dublin adopt the 'apothecaries' or 'wine measure' in which the division is as above, the London and Edinburgh Colleges use the "Imperial measure," in which the gallon is divided into eight pints, and the pint into twenty fluidounces. The great difference between the two in the value of the pint and the gallon is shown by the following tables:

## IMPERIAL MEASURE.

Gallon.		Pints.		Fluidounces.		Fluidrachms.		Minims.
1	=	8	=	160	=	1280	=	76800
		1	=	20	=	160	=	9600
				1	=	8	=	480
						1	=	60

## APOTHECARIES' OR WINE MEASURE.

Gallon.		Pints.		Fluidounces.		Fluidrachms.		Minims.
1	=	8	=	128	=	1024	=	61440
		1	=	16	=	128	=	7680
				1	=	8	=	480
						1	=	60

Besides these weights and measures, there are certain modes of estimating quantities of substances by approximation.

A cupful is	f. $\overline{3}$ iv. or v.
A wineglassful,	f. $\overline{3}$ iss. to $\overline{3}$ ij.
A tablespoonful,	f. $\overline{3}$ ss.
A coffee or dessert spoonful,	f. $\overline{3}$ ij.
A teaspoonful,	f. $\overline{3}$ j.
Pugillus, (French <i>Pincée</i> ) is as much as can be held by the three fingers. &c. &c.	

The following vocabulary will aid the student, not only in translating, but in writing, his prescriptions *more solito*.

## A.

ACIDITAS, 'sharpness.' Adde succum limonis ad gratam *aciditatem*, 'add the lemon juice so as to make it agreeably acid.'

ADÆQUO, 'to be equal to.' Quod pisum *adæquat* infricandum, 'the size of a pea to be rubbed in.'

ADDE, 'add.' ADDATUR, ADDANTUR, 'let there be added.' ADDENDO, 'adding.'—Sub finem coctionis, *adde, addatur vel addantur, addendo*:—'towards the end of the boiling'—(as in the preparation of decoction) 'add, let there be added, or adding.'

ADMOVEATUR, ADMOVEANTUR, 'let there be applied.' *Admoveatur* epispasticum dorso:—'let a blister be applied to the back.'

ADSTANS, 'present.' Omittatur cinchona *adstante* febre. 'Omit the bark or cinchona, whilst the fever is present.'

ÆGER, ÆGRA, 'a sick person.' Habeat *Æger vel Ægra* Haustum anodynum. 'Let the patient have an anodyne draught.'

AGGREDIENS, 'coming on,' 'approaching.' Sumat haustum emeticum *aggrediente* febre. 'Let him have an emetic draught, when the fever is coming on.'

AGITO, 'to shake;' AGITATUS, 'shaken.' *Agita* phiālam, 'shake the vial.' *Agitato* vase,—'the vessel being shaken.'

ALTERNUS, 'alternate,' 'every other.' Sumatur *alternis* horis, vel *alternis* diebus, 'let it be taken every second hour, or every second day.'

ALUTA, 'leather.' Extende emplastrum super *alutam* mollem, 'extend or spread the plaster on soft leather.'

ALVUS, 'the belly,' 'the bowels.' Utatur oleo ricini *alvo* adstrictā, 'let castor oil be used, when the bowels are confined.' Donec *alvus* soluta sit, 'until the bowels are opened.'

ANIMUS, 'the mind.' Ad defectionem *animi*:—'to fainting.'

ANTEMERIDIANUS, 'in the forenoon.' Utatur enema horā octavā *antemeridianā*, 'let the enema be used at eight o'clock in the morning.'

AQUA, 'water.' *Aqua* calida, 'warm water.' *Aqua* tepida, 'tepid water.' *Aqua* frigida, 'cold water.' *Aqua* fervens, 'hot water.' *Aqua* bulliens, 'boiling water.' *Aqua* fontana, 'spring water.' *Aqua* pluvialis, 'rain water.'

ARMATUS, 'armed,' 'provided.' Fistula *armata*, 'an armed pipe.' The prepared bag and pipe for giving clysters.

## B.

BIDUUM, 'the space of two days.' Omni *biduo*, 'every two days.'

BIHORUM, 'the space of two hours.' Sumatur omni *bihorio*, 'let it be taken every two hours.'

BINUS, 'two.' Macera per horas *binas*, 'macerate for two hours.'

BIS, 'twice.' *Capiat pulverem bis terve*, 'let him take a powder twice or thrice.'

## C.

CAPĪO, 'I take;'—as in the example just given. *Capiat cochl. ij.*, 'let him take two table-spoonfuls.'

CEREVISIA, 'ale or beer.' *Cerevisia* 'porter' dicta, *Cerevisia Londinensis*, 'porter.'

CHARTA, 'paper.' Cola trans (vel per) *chartam* bibulam, 'filter through bibulous paper.' Divide in *chartūlas* vj., 'divide into six papers.' Detur ad *chartulam*, 'let the quantity in the paper be given.'

CLAUSUS, 'shut; covered.' Digere in vase *clauso*, 'digest in a covered vessel.'

COCHLEĀRĒ, 'a spoonful.' *Cochleare* magnum vel amplum, 'a table-spoonful.' *Cochleare* medium; *Cochleare* infantulorum vel infantum; *Cochleare* modicum, 'a dessert-spoonful; a child's spoonful.' *Cochleare* parvum vel parvulum, 'a tea-spoonful.'

COCTIO, 'a boiling.' Adde sub finem *coctionis*, 'add towards the end of the boiling.'

CÆNA, 'supper.' *Capiat pilulam horā ante cœnam*; 'take a pill an hour before supper.'

COLO, 'I strain;' COLĀTUS, 'strained.' *Cola* misturam, 'strain the mixture.' *Liquori colāto* adde, 'to the strained liquor add.' *Colatūræ* adde—has the same meaning.

CONCĪDO, 'I cut to pieces;' CONCĪSUS, 'cut to pieces.' *Radicibus concisis*, 'the roots being cut to pieces.'

CONTUNDO, 'I bruise;' CONTUSUS, 'bruised.' *Contunde gummi in mortario*, 'bruise the gum in a mortar.' *Radicibus contūsis*, 'the roots being bruised.'

CORPUS, 'a body.' Contunde donec *corpus* sit unum, 'bruise until they are incorporated, or form one body.'

CRAS, 'to-morrow.' Sumatur *cras* mane, 'let it be taken to-morrow morning.' *Cras* vespere, 'to-morrow evening.' In usum *crastinum*, 'for to-morrow's use.'

CUCURBITULA, 'a gourd,' 'a cupping-glass;' *C. C.*, *Cucurbitulæ* siccae, 'dry cupping.' *Cucurbitulæ* cruentæ, (vel cum ferro,) 'cupping with the scarificator.'

CYATHUS, 'a cup,' 'a cupful.' *Cyathus* vini vel vinarius, 'a wine-glass.' *Cyathus* theæ, 'a teacup.'

## D.

DECUBITUS, 'lying down.' Horâ *decubitûs*, 'the hour of lying down;' 'bed-time.'

DEGLUTIO, 'I swallow.' *Deglutietur* bolus vespere, 'let the bolus be swallowed in the evening.'

DEJECTIO, 'a depositing;' also, 'an alvine discharge,' from DEJICIO, 'I go to stool.' Post duas *dejectiones* alvi habeat enema opiatum, 'after two evacuations, let him have the opiate enema.' Repetatur catharticum donec alvus bis *dejiciat*, 'repeat the cathartic until the bowels shall respond twice.'

DIES, 'a day.' In *dies*, 'every day, daily.' Bis *die*, 'twice a day.' Secundis *diebus*, 'every second day.' Alternis *diebus*, 'every alternate day.' De *die*, 'in a day.' De *die* in *diem*, 'from day to day.'

DILUCULUM, 'day break.' Sumatur *diluculo*, 'let it be taken at break of day.'

DIU, 'a long while.' Tere *diu*, 'rub for a long time.' *Diuturnâ* coctione, 'by long-continued boiling.'

DO, 'to give.' *Da* pilulam statim, 'give the pill imme-



diately ;' or *Detur* pilula statim, 'let the pill be given immediately.'

DOLOR, 'pain.' Urgenti *dolore*, 'the pain being urgent.' Durante *dolore*, 'the pain continuing.' Applicetur cataplasma parti *dolenti*, 'apply the cataplasm to the pained part.'

## E.

EXHIBĚO, 'I exhibit.' *Exhibeātur* enema, 'let the glyster be given.' Fiat mistura ter die *exhibenda*, 'make into a mixture to be given three times a day.'

## F.

FARĪNA, 'flour,' 'meal.' *Farina* seminis lini, 'flaxseed meal.'

FICTĪLIS, 'earthen.' *Serva* in vasis *fictilibus*, 'keep in earthen vessels.'

FISTULA, 'a pipe.' See ARMATUS.

FONTICULUS, 'a little fountain,' 'an issue.' Fiat *fonticulus*, 'let an issue be made.'

FOTUS, 'a fomentation ;' from FŎVEO, 'I foment.' Utatur *foŭ aquæ ferventis*, 'let him use a fomentation of hot water.' *Foveantur* partes aquâ calidâ, 'let the parts be fomented with warm water.'

FRICO, 'to rub.' *Fricētur* corpus oleo, 'let the body be rubbed with oil.'

## G.

GELATĪNA, 'jelly.' *Gelatina* ribesiorum, 'currant jelly.'

## H.

**HERI**, 'yesterday;' **HESTERNUS**, 'belonging to yesterday.' *Capiat haustum ut heri*, 'take the draught as yesterday.' *Capiat haustum ut hesternâ nocte*, 'take the draught as last night.'

**HIRUDO**, 'a leech.' *Applicentur hirūdines xvij dorso*; 'let eighteen leeches be applied to the back.'

**HORA**, 'an hour.' *Horâ ante cœnam*, 'an hour before supper.' *Horâ somni*,—abbreviated, *h. s.* 'at the hour of sleep.' *Horâ somni sumendus*;—abbreviated, *h. s. s.* 'to be taken at the hour of sleep.' *Horâ decubitûs*, 'at bed time.' *Horæ unius spatio*, 'at the end of an hour.' In *horas*, 'every hour.' *Horâ septimâ vespertinâ*, 'at seven o'clock in the evening.' *Horâ septimâ matutinâ*, 'at seven o'clock in the morning.' *Horæ quadrans vel pars quarta*, 'a quarter of an hour.' *Horis intermediis*, 'at intermediate hours,'—as where two medicines are prescribed.

## I.

**ILLINO** or **ILLĪNIO**, 'to anoint, or besmear gently.' *Illinere unguento oculis*, 'to anoint the eyes with ointment.' *Oculos sanare illitû*, 'to cure the eyes by anointing.'

**IMPŌNO**, 'I place on.' *Imponatur emplastrum lateri*, 'let the plaster be put on the side.'

**INCĪDO**, 'I cut;' **INCĪSUS**, 'cut.' *Radicibus incisis adde*, 'to the cut roots add.'

**INJICĒO**, 'I inject.' *Injiciatur enema*, 'let the glyster be injected.' *Fiat enema statim injiciendum*, 'make into an enema, to be injected immediately.'

**INSTAR**, 'bigness.' *Sumat molem instar nucis avellanæ*, 'let him take the bigness of a hazel nut.'

**INTERNUS**, 'internal.' *Applicentur sinapismata internis*

femoribus, 'let sinapisms be applied to the interior of the thighs.'

J.

JENTACULUM, 'breakfast.' Sumatur pulvis horis binis ante *jentaculum*, 'let the powder be taken two hours before breakfast.'

JUS, JUSCULUM, 'broth.' *Jusculum* ovillum, 'mutton broth.' *Jusculum* vitulinum, 'veal broth.' *Jus* bovinum, 'beef tea.'

L.

LANULA, 'flannel,' from *Lana*, 'wool.' Utatur *lanula* novâ, 'let new flannel be used.'

LANGUOR, 'faintness.' Capiat misturam in *languoribus*, 'let the mixture be taken when faint.'

LATUS, 'the side.' Admoveatur vesicatorium *latèri* dolenti, 'let a blister be applied to the pained side.'

LIBITUM, 'one's will, and liking.' Bibat potum bitartratis potassæ ad *libitum*, 'let him take the drink of bitartrate of potassa at pleasure.'

LIQUESCO, 'to liquefy, melt;' also LIQUO. Donec *liquecat*, 'until it melts.' *Liqua* simul, 'melt together.'

M.

MANE, 'in the morning.' Primo *manè*, and valdè *manè*, 'early in the morning.' Cras *manè*, 'to-morrow morning.' *Matutinus*, 'belonging to the morning or forenoon;' as Horâ undecimâ *matutinâ*, at 'eleven in the morning.'

MEDIUS, 'middle;' as *mediâ* nocte, 'in the middle of the night.'

MINOR, 'to threaten.' Capiat cinchona *minante* paroxysmo, 'let the cinchona be taken—the paroxysm threatening.'

MITTO, 'to send.' *Mitte* chartas sex; vel *mittantur* chartæ sex, 'send six papers;' or, 'let six papers be sent.' *Mittatur* sanguis ad uncias duodecim, 'let blood be lost to twelve ounces.'

MODUS, 'a manner.' *Sumantur* pilulæ *modo* præscripto, 'let the pills be taken in the manner prescribed.'

MOLES, 'a mass;' 'a piece.' *Sumat molem* instar nucis moschatae, 'let him take a piece the size of a nutmeg.'

MOLESTUS, 'troublesome.' *Molestante* dolore capiat, &c., 'the pain being troublesome, let him take.' *Molestante* tussi, 'the cough being troublesome.'

MORA, 'delay.' *Mittatur* sanguis sine *morâ*, 'let blood be drawn without delay.'

MORTARIUM, 'a mortar.' *Mortarium* ahēneum, 'a brass mortar.' *Mortarium* marmoreum, 'a marble mortar.' *Mortarium* vitreum, 'a glass mortar.'

MOS, 'manner.' *Utatur* gargarismate *more* solito, 'let the gargle be used in the wonted manner.'

## N.

NARTHÉCIUM, 'a gallipot.'

NOX, 'night.' *Sumatur nocte*, vel *nocte* manèque, vel alternis *noctibus*, 'let it be taken at night, or day and night; or every other night.'

NUCHA, 'the nape of the neck.' *Applicetur* moxa *nuchæ*, 'let moxa be applied to the nape of the neck.'

## O.

OBSTANS, 'hindering,' 'opposing.' *Utatur* cinchonâ paroxysmo non *obstante*, 'let the bark be used, the paroxysm not preventing.'

OBTURO, 'to stop up;' OBTURATUS, 'stopped up.' *Serva in vase bene obturato*, 'keep in a vessel well stopped.'

OLLA, 'a pot;' also 'a gallipot.'

OVUM, 'an egg.' *Albūmen ovi*, 'the white of egg.' *Vitellus ovi*, 'the yolk of egg.'

## P.

PANNUS, 'a cloth.' *Pannus linteus*, 'a linen rag or cloth.' *Pannus laneus*; *Pannus e lanâ vel lanulâ*, 'a flannel cloth.' *Foveantur partes aquâ fervente ope panni lanci*, 'let the parts be fomented with hot water by means of flannel.'

PENDO, 'to weigh.' *Pensus*, 'weighed.' *Recipe strychniæ, accurate pensæ, &c.* 'take of strychnia, accurately weighed,' &c.

PERGO, 'to go on; to continue.' *Pergat in usû medicaminum*, 'continue in the use of the medicines.'

PERĀGO, 'to finish;' PERACTUS, 'finished.' *Peractâ operatione emetici*, 'the action of the emetic being finished.'

PERFRICO, 'to rub.' *Perfricentur partes affectæ lini-mento præscripto*, 'let the affected parts be rubbed with the prescribed liniment.'

POMERIDIANUS, POSTMERIDIANUS, 'belonging to the afternoon;' as *horâ primâ pomeridianâ*, 'at one in the afternoon.'

POTUS, 'drink.' *Habeat solutum bitartratis potassæ pro potû communi*, 'let him have the solution of cream of tartar for common drink.'

PRANDIUM, 'dinner.' *Sumatur pilula horâ ante prandium*, 'let the pill be taken an hour before dinner.'

PRO RE NATÂ; abridged *p. r. n.* 'as occasion may require.'

PULMENTUM, 'gruel.' *Capiat pulverem in pulmento*, 'let the powder be taken in gruel.'

Pyxis, genitive Pyxidis, 'a pill-box;' 'a lozenge box.'

## Q.

QUAMPRIMUM, 'as soon as possible.' Adhibeatur enema *quamprimum*, 'let the injection be given as soon as possible.'

QUIVIS, 'any one.' Sumatur *quovis* vehiculo, 'let it be taken in any vehicle.'

QUIESCO, 'to go to rest;' 'to become easy;' as, continue-  
tur remedium donec *quiescat*, 'continue the remedy until  
he grows easy.'

QUANTUM SUFFICIT, 'as much as is sufficient;' often  
abridged *q. s.*

## R.

RATIO, 'a proportion.' Pro *ratione* ætatis, 'according  
to the age.' Pro *ratione* doloris, 'according to the urgency  
of the pain.'

RECIDIVUS, 'relapsing;' ad *recidivum* præcavendum,  
'to prevent a relapse.'

REGIO, 'a region.' Applicetur *regiōni* epigastricæ;  
*regiōni* lumborum, *regiōni* umbilicali, &c., 'let it be ap-  
plied to the epigastric region, the lumbar region, the umbi-  
lical region,' &c.

REDIGO, 'to reduce;' REDACTUS, 'reduced.' *Redige*  
*vel redigatur* in pulverem, 'reduce, or let it be reduced  
into powder.' In pulverem *redactum*, 'reduced into pow-  
der.'

REPETO, 'to repeat.' *Repete* vel *repetantur* remedia,  
'repeat the medicines, or let them be repeated.'

RESPONDEO, 'to answer.' Donec alvus bene *responderit*,  
'until the bowels have well responded.'



## S.

SEDES, 'an evacuation by the bowels.' Capiat anodynum post singulas *sedes* liquidas, 'take the anodyne after every liquid evacuation.'

SERUM, SERUM LACTIS, 'whey.' Sumatur in *sero* lactis vinoso, 'in wine whey.'

SINGULUS, 'each.' Pulveris jalapæ, hydrargyri submuriatis, *singulorum* (vel ana) grana quinque, 'of powdered jalap and calomel, each five grains.'

SOLUTUS, 'dissolved,' 'loosened.' Donec alvus *solūta* fuerit, 'until the bowels be opened.'

SPISSITAS, 'thickness.' SPISSUS, 'thick.' Sumatur hydrargyri chloridum mite in quovis vehiculo *spisso*, 'let the calomel be taken in some thick vehicle.' Coque ad debitam *spissitatem*, 'boil to the proper consistence.'

STUPA, 'tow.' Involvanter partes in *stupâ*, 'let the parts be wrapped in tow.'

SUB, 'under ;' prefixed to many words, has the signification of the English termination *ish*. *Subniger*, 'blackish.' *Subtepidus*, 'warmish.' *Subacutus*, 'acutish, &c.

SUBIGO, 'to subdue,' 'to dissolve,' 'to cause to unite.' *Subige* hydrargyrum adipe, 'subdue the mercury with lard.' Hydrargyro *subacto*, 'the mercury being subdued.'

SUBTILIS, 'subtile,' 'reduced to fine powder.' Pulvis *subtilissimus*, 'the very finest powder.'

SUMO, 'to take.' *Sumat* æger pilulas duas, 'let the patient take two pills.' *Sumatur*, 'let it be taken.'

SUPERBIBO, 'to drink after.' Post emeticum *superbibat* infusum anthemidis, 'after the emetic, let him drink chamomile tea.'

## T.

TEMPUS, genitive TEMPÖRIS, 'time,' 'the temple.' Applicetur lotio *tempori* dextro, 'let the lotion be applied to the right temple.'

TERO, 'to rub;' TRITUS, 'rubbed.' *Tere* simul, 'rub together.' Simul *triti*, 'rubbed or ground together.'

TRIDUUM, 'the space of three days.' Omni *triduo*, 'every three days.'

## U.

ULTIMÖ, 'last.' Continuetur potio *ultimo* præscripta, 'let the potion, last prescribed, be continued.'

URGEO, 'to urge,' 'to be troublesome.' *Urgenti* dolore, 'the pain being troublesome.'

USQUE AD, 'up to,' 'as far as.' Pergat in usû antimonii *usque ad* nauseam, 'continue the use of the antimony until it induces nausea.'

## V.

VALEO, 'to avail.' Repete catharticum si non *valcat*, 'repeat the cathartic, if it does not answer.'

VEHICULUM, 'a vehicle,' 'that in which a medicine is taken.' Sumatur in quovis *vehiculö*, 'let it be taken in any vehicle.'

VESPERE, 'in the evening.' VESPERTINUS, 'belonging to the evening.' Repetatur haustus *vespere*;—horâ sextâ *vespertinâ*, 'let the draught be repeated in the evening;—at six o'clock in the evening.'

VICES, 'turns.' Ad duas *vices* sumendus, 'to be taken at twice.' Partitis *vicibus*, 'in divided or broken doses.'

We come now to the question:—what subjects the office-student should peruse during his first year, and

before he has commenced his attendance on lectures? Generally, on this point, the preceptor gives himself but little trouble. The youth is received into the office: the books,—few or many as the case may be—are placed at his disposal, and he is left to his own discretion—which may be a negative quantity—as to the topics he shall peruse. Under such circumstances, it will almost always happen, that those subjects, which minister most to his curiosity, and which are, therefore, the least dry, will first attract his attention, and a discursive habit may, in this manner, be acquired, which may shed its injurious influence over his subsequent career.

In other cases, a ‘Dispensatory’ is placed in his hands; the greater part of which he necessarily finds it impossible to comprehend, in consequence of the perpetual recurrence of terms belonging to the natural sciences, and indeed of explanations, by no means demanded in a work, which is strictly devoted to the *materia medica*. In the very first article, for example, of his Dispensatory, he finds ‘*ACACIÆ GUMMI*,’ gum Arabic; the concrete juice of the *Acacia vera*, which is said to be in the class *polygamia*, order *monœcia*, of Linnæus; *monadelphica polyandria*, of Persoon; and of the natural order *leguminosæ*, of Jussieu. The general characters are described to be ‘*HERMAPHRODITE*;  
*Calyx*, five-toothed: *Corolla*, five-cleft or formed of five petals. *Stamens*, 4—100; *Pistil*, one. *Legume*, bivalve. MALE, *Calyx*, five-toothed. *Corolla*, five-cleft, or formed of five petals. *Stamens* 4—100.’

Again; if he turns to the *CANTHARIS* or ‘Spanish fly,’

he finds it is in the class *Insecta*; order *Coleoptera*; formerly *Trachelides*; tribe *Cantharideæ*, of Latreille; and that its *general characters* are; "*Tarsi*, entire—*nails*, bifid; head not produced into a rostrum; *elytræ* flexible, covering the whole abdomen, linear, semicylindric; *wings* perfect; *maxillæ* with two membranaceous lacinix, the external one acute within, subuncinate; antennæ longer than the head and thorax, rectilinear; first joint largest, the second transverse, very short; *maxillary palpi* larger at tip.—*Say*."—All of which must necessarily be impenetrable to one, whose attention has not been much directed to the study of the natural sciences,—and such is the case with almost every medical student.

"The extent and nature of the subject" (*Materia medica*)—says a modern writer—(Professor A. T. Thomson,)—"has been too little considered, and the preliminary acquisitions, requisite for its proper acquirement, most unaccountably overlooked, in the course of studies prescribed by the incorporated medical bodies in this country. (England). Instead of commencing his medical education, by attending lectures on *materia medica*, which is an obligation imposed upon him by the existing regulations, the student should previously attend, at least, one course of Natural History, Botany, Chemistry, Anatomy, and Physiology: and not till then can he be expected to comprehend the doctrines delivered in a course of *materia medica*, far less those relating to *Therapeutics*."

In accordance with those views, Dr. Thomson (and, following him, Dr. Pereira) has endeavoured to incorporate into his work every thing, that can be regarded

as elucidative of the subject, from the domains of Natural History, Botany, Chemistry, Anatomy, Physiology, and indeed of every department of the science. It is obvious, that there may be some advantage in this plan; but, if it were followed throughout, works, professing to be on isolated branches, would cease to be confined to them, and details would be introduced, which would necessarily add largely to the expense of such productions, and which might readily be found elsewhere: in this way, endless repetition would be indulged without any equivalent advantage.

As, too, the medical schools—of this continent especially—are constituted, it would not be an easy matter to carry into effect the recommendation of Professor Thomson, were it eminently desirable. Fortunately, the evil is not as great as has been represented. It would, doubtless, be well, that the physician should know the natural history of the animal whence he obtains his castor, his musk, &c., and that he should be acquainted with the botanical relations of the plants, whose preparations he prescribes: but such a knowledge is no more *indispensable*, than Greek is to an acquaintance with medical Technology. The argument may, indeed, be extended to the consumer of the products of the animal and vegetable kingdom as articles of diet. It would be well for him, no doubt, to be acquainted with the natural history of the ox, the sheep, the hog, &c., whence he derives his sustenance; yet, notwithstanding his ignorance on this point, universal experience demonstrates, that he has no difficulty in appropriating them to his dietetic necessities.

Impressed with these views, the author, in preparing the details of *materia medica* in a recent work (*General Therapeutics and Materia Medica*, vol. ii. p. 3. Phila. 1843) did not consider it advisable to go farther into the natural and commercial history of drugs than was indispensable for the medical student. In all cases he has referred to the position held by the drug as an article of the organized, or the inorganic kingdom,—as well as to general matters of interest relative to the place where it is found, the manner in which it is obtained, and to certain points connected with its commercial history; but next to therapeutical applications, he has dwelt more at length on the sensible properties by which the physician may be enabled to judge of the various articles from his own observation. In the short time allotted to a session of medical lectures, there is scarcely opportunity afforded to teach that which is indispensable to the therapist.

“The different professions”—observes a recent learned author, Dr. Latham—“have one way of glorifying themselves, which is common to all. It is by setting forth a vast array of preparatory studies, and pretending they are indispensable in order to fit a man for the simple exercise of the practical duties that belong to them. I have heard lawyers make such a mighty parade of the things, which a man must know before he is called to the bar, that, according to the average of human capacities, not one in fifty has the smallest chance of mastering them; and of those who do master them, not one in fifty can employ them to the uses for which they are intended. I once saw a list of books



recommended by a professor of divinity to the study of those going into holy orders. They were more numerous than the majority of even studious men ever read in their whole lives; yet these were a few prolegomena introductory to the office of a parish priest. We, too, conceive that it befits our dignity to magnify ourselves at certain seasons. The commencement of a session is usually the time chosen; and then, what a crowd of wonderful things are marshalled by authority around the entrance of our profession! And through this crowd, it is implied, every man must press his way before he can obtain admission. As if we wished to guard and garrison ourselves against invaders, rather than to gain good and useful confederates! In the affair of literature are reckoned Latin, and Greek, and French, and Italian, and German. In the affair of science, mathematics, and metaphysics, and mechanics, and optics, and hydraulics, and pneumatics, mineralogy, botany, zoology, and geology. Such are the portentous forms that guard the threshold. But farther onward are placed anatomy,—human and comparative, and morbid; physiology and pathology; chemistry,—general and pharmaceutical, and materia medica; surgery,—theoretical, clinical, operative, and ophthalmical; medicine,—theoretical, clinical, obstetrical, and forensical. The general display of objects so grand and multifarious is formidable enough; but not half so formidable as their representation in detail. Of the great cosmogony of medicine there are several departments, and each professor never fails to magnify his own, by counting the cost of time and labour, which you must be pre-

pared to bestow, if you wish to make any progress in it. "Haller (perhaps such an one will say) surely knew what anatomy is, and how much goes to make an anatomist; and Haller has estimated the cost at twenty years of time and labour."

"Now, I am persuaded that there does not exist at this day in the profession an individual who comes up to this standard, which (it is implied) all ought to reach.

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"If all medical students had fifteen or twenty years at their disposal, and could dedicate them all to professional education, we might pardon a little innocent declamation in displaying the rich and varied field of knowledge about to be disclosed to them, but even then, sober truth would compel us to confess, that the field so pompously displayed far excelled in extent what the best minds could hope to compass, even in fifteen or twenty years. When, however, we recollect what space of time the majority of men so addressed really can give to their education, the whole affair becomes inexpressibly ludicrous. Now I do protest, in the name of common sense, against all such proceeding as this. It is all very fine to insist that the eye cannot be understood without a knowledge of optics, nor the circulation without hydraulics, nor the bones and muscles without mechanics: that metaphysics may have their use in leading us through the intricate functions of the nervous system, and the mysterious connexion of mind and matter. It is a truth; and it is a truth, also, that the whole circle of the sciences is required to comprehend a single particle of

matter: but the most solemn truth of all is, *that the life of man is threescore years and ten.*" "You may recommend," he subsequently remarks, "that every man, before he enters upon the study of physic, should obtain the best general education within his reach; but you must specify nothing as absolutely necessary but what bears immediately upon professional use."

It is not in its relation to *materia medica*, that the study of natural history ought to be esteemed most important. As physiology investigates the nature and functions of all living bodies, it is, necessarily, intimately associated with natural history. It is, indeed, indebted to this branch of physics, more, perhaps, than to any other. A comparative view of the various gradations amongst organized beings has taught us to appreciate the nature of the several functions, that characterize vitality; and has demonstrated, that in proportion as the structure is more complex the functions are more numerous and perfect. Repeated observations, and multiplied experiments, on various tribes of animated nature, have elucidated many doubtful and obscure phenomena in the economy of man; and a continuation of this method of research promises to place physiology on the firm basis of rational experience; and to enable us to reason—where only we can reason with safety—by a deduction from facts. The more numerous these facts, and the more satisfactory their arrangement, the more extensive and the more secure will be the foundation they afford for physiological conclusions.

Botany might seem to be of much more service to the physician than zoology, inasmuch as so many of

our remedies are derived from the vegetable kingdom. At one time, indeed, nothing but 'galenicals,' as they were termed, were employed, and these were mainly of vegetable origin. We can imagine the importance of an acquaintance with the botanical characters of different vegetables, should destiny cast the physician on some unknown shore, where the sole sustenance may have to be derived from the vegetable kingdom, and where hundreds, perhaps, may have to be guided to a knowledge of the innoxious and the noxious, by his decision. It might happen, too, that the physician, may be so situated, as to be unable to procure those indigenous productions, which are usually selected so carefully by the professed herbalist, as to render it less necessary that they should be culled by him. In such case, his botanic knowledge would be called into play. Still, these are rare emergencies, on account of the facility, with which articles of merchandise can be transported every where; and, as the preparation of medicinal productions constitutes a distinct calling, the physician is generally in the habit of depending upon the apothecary,—who gets them from the herbalist,—for his supplies.

It is of more practical importance, that the physician should know the genuineness of every article that comes to him;—a knowledge, which observation—rather than botany—gives him. Still, 'like every branch of the tree of knowledge, phytology and the natural sciences in general have a tendency to expand the mind, and to react upon trains of thought, with which they do not, at first, appear to be intimately associated.

In but few of the medical schools of this continent,

is botany or natural history made a distinct branch of medical education. The period of the year, at which medical instruction is chiefly conveyed, is unfavourable to botanical exercises; but the seasons of Spring, Summer, and Autumn, are well adapted,—especially the first, when all Nature smiles; and

“From the meadow to the wither’d hill,  
Led by the breeze, the vivid verdure runs,  
And swells, and deepens; and the juicy groves  
Put forth their buds, unfolding by degrees,  
Till the whole leafy forest stands display’d,  
In full luxuriance, to the sighing gales.”

At these seasons, the student cannot do better—should his opportunities, whilst in the office of his preceptor, permit—than make himself acquainted practically with botany—both by study and observation in the fields; and should he be unable to become a good zoologist,—so far as regards a knowledge of the generic and specific characters of animals,—he can, at least, acquire a knowledge of the ‘philosophy of zoology,’—one of the most interesting of the applications of natural science, and one that throws important light on the functions of the human body. It embraces, indeed, the physiology of animals, every topic of which elucidates that of man.

During the first year of office study, *full* benefit cannot accrue from the perusal of works on any of the branches of medical science. Perhaps, the most proper to be placed in the student’s hands would be a treatise on physiology, which contains sufficient anatomy to enable him to acquire the terms, and to have a ge-

neral idea of the structure and functions of the different parts of the organism. If he possess but a slight acquaintance with chemistry, general anatomy or the anatomy of the textures can be studied, at this period, almost as well as at any other.

The knowledge, which the student attains of his profession during the first year of his application, in an office, will necessarily be mainly restricted to the subjects that have been expatiated upon. He will, then, be enabled to enter upon his collegiate attendance with every advantage.



## CHAPTER III.

## MEDICAL EDUCATION DURING THE PERIOD OF ATTENDANCE ON LECTURES.

THE regulations of almost every medical college in the Union require, that the student shall have attended two full courses of the lectures delivered therein, before he is permitted to offer himself for graduation. In the schools of Philadelphia, until recently, the following subjects constituted the curriculum:

1. Anatomy.
2. Theory and Practice of Physic.
3. Materia Medica and Pharmacy.
4. Chemistry.
5. Surgery.
6. Midwifery and the diseases of women and children.

Of late, in the University of Pennsylvania, the department of Institutes of Medicine—a term of somewhat indefinite meaning, but generally understood to comprise, the general physiological, pathological, hygienic and therapeutical relations of medicine, or physiology in its application to pathology, hygiene, and therapeutics—has been separated from the chair of Theory and Practice, and erected into a separate professorship; and, still more recently, in the Jefferson Medical College, a chair of the Institutes of Medicine and Medical Jurisprudence has been created, to which the author was appointed.

In certain of the schools, the department of Institutes forms no part of the curriculum of studies; yet most imperfect must that scheme of instruction be, which rejects the consideration of physiology in its various relations,—confessedly the basis of all our reasoning in medicine.

It is expected, too, in the different schools—and occasionally required—that the candidate for the *summi honores* shall have attended a clinical course, and practical anatomy in the dissecting room, for one session at least.

It is obvious, that if the circumstances of the student will only enable him to attend the collegiate exercises during two sessions, there is no opportunity afforded him for the selection of subjects for study, in the order of time. He is compelled to attend to all, and to exhibit his qualifications in all, at the expiration of the second session, when he presents himself as a candidate for graduation. If, however, he be enabled to devote three years to his attendance on lectures, it may admit of a moment's question, as to the departments to which his attention should be mainly—if not exclusively—directed during the first year.

The common feeling is, that he should confine himself to attendance on the lectures on anatomy, physiology, and chemistry;—and the view is, perhaps, judicious. These departments are introductory to the rest, and an acquaintance with them facilitates the labours of the student in his after attendance.

It would certainly be advisable, that a course of lectures on anatomy should be followed, before practical

anatomy is prosecuted,—upon the principle, that it is well for a traveller to possess some knowledge of the geography, names, &c. of a district, before he undertakes a journey through it; but, as the first of the three years' study—conducted in the manner advised—is comparatively one of leisure, it may admit of dispute, whether a larger amount of positive benefit might not accrue to the student from a prosecution of his anatomical pursuits *practically* in the dissecting room, even during a first year's attendance upon lectures.

Again, it has been maintained by some, that from the very outset of his career of professional inquiry, the student should follow the professor through the wards of an hospital. "Physicians," says a modern writer on this subject, M. Vaidy, "are not agreed as to the period at which the pupil should commence his attention to clinical medicine. I am firmly convinced, that he should do so from the first day of his studies. The art of healing, like every art, is acquired essentially by practice. To teach pathology to a man who has never seen disease is to weary his attention without the slightest profit. The objects, which have to be treated, are as yet devoid of existence to him. What can be understood of the theory of inflammation and of suppuration, by one, who has neither seen phlegmon nor ulcer? He must commence, therefore, by the empirical observation of facts. The theoretical explanation of those facts, and their systematic co-ordination must come afterwards to constitute the science. The pupil will not at first comprehend what the clinical professor may say, but he will assist himself by a

dictionary of medical terms, and he can besides consult such of his fellow pupils as are more advanced than himself.

The different departments of medical science are, in truth, so dove-tailed into each other—so mutually dependent—that hesitation may exist as to those, which ought to be selected in the way of priority. Still, it must be better for the student to postpone the practical examination of cases, until he has obtained some of that preliminary instruction, which—as we have seen—is so important to the anatomist before he commences the dissection of the subject. By a sedulous attendance on a single course of the lectures delivered in a medical school, he attains this instruction; and, during his second year, he is enabled to reap all the advantage from clinical observation, which it is capable of affording him.

The difficulty of selecting the departments for a first year's employment, where the student has three years at his disposal, has led some to advise, that he should attend a full course during the first and second years; and—as according to the regulations of the different medical institutions, he is free to the lectures after he has attended two courses—that he should select, during the third year, those departments in which he is most deficient, or to which his attention ought especially to be directed.

Perhaps, on the whole, this is the wisest course; inasmuch as, during the third year, he is better able to seize on all the valuable information, which an attention to medical and surgical clinics cannot fail to present to him. He is situate, indeed, during this third

year, like the majority of the young graduates, who commence the practice of their profession;—by far the greater number of those, who attain the *summi honores*, having had no opportunity of following collegiate instruction longer than two sessions.

It may happen, too, that the personal circumstances of the student may become so much modified as to render an early graduation advisable; and unless he has taken the whole course for two sessions, the opportunity will be denied him. Scarcely a year passes, in which the author has not had occasion to hear the regrets of those who had taken only part of the tickets during their first session,—domestic events having interfered so as to render it difficult, and in some cases impracticable, for them to attend a third session, which in such case is indispensable before they can offer themselves as candidates for a degree.

The mode for attaining the greatest amount of good—to be pursued by those whose opportunities are so restricted as to permit them to attend two courses of lectures only,—forms an interesting topic of inquiry, and is the proper subject of ‘Medical Methodology.’

At the very commencement of his attendance upon lectures, the student is apt to conceive, that, in the multiplicity of subjects to which his attention is necessarily directed through the day, it is impossible for him to succeed, and he is often disposed to relinquish the study in despair. Fortunately, however, it rarely happens, that this disposition is carried into effect, before he finds, that his mind is every day expanding;

that the truths of science become more and more intelligible; the memory more retentive, and the labour, therefore, largely diminished. Despair now vanishes, and hope—"the glad ray, glanc'd from eternal good,"—cheers him on his course, until he vanquishes all obstacles, and attains that goal, which has been the source of his loftiest aspirations.

In a previous chapter, a few—a very few—examples were given,—selected from a host of professional worthies, now no more, with the view of showing what zeal and enthusiasm in the pursuit of knowledge are capable of effecting; and what honour and reputation may be acquired by time well spent, not only whilst in the preparatory study of the profession, but during its active exercise. Yet, to attain the high degree of eminence of any one of those scientific individuals requires, on the part of the student, rather, that the time passed in reflection should be well passed, than that it should be long protracted.

Attempts have been made, by such men as Lord Coke, and the leviathan of English literature—Dr. Samuel Johnson—to fix the time, that may be daily employed in study with advantage; but, although the latter affirms, that "a young man should read five hours a day, and so may acquire a great deal of knowledge"—he properly adds, that "a man ought to read just as inclination leads him; for what he reads as a task will do him little good." "Idleness," he says, "is a disease, that must be combated; but I would not advise a rigid adherence to a particular plan of study. I myself have never persisted in any plan for two days



together.” Fortunately for the medical student, it happens, that there is ample choice of subjects in the interesting science he has embraced, so that he need never be at a loss for variety, and when one palls temporarily on the mind, it can be replaced with facility by another.

The estimate of the proper daily duration of study, made by those illustrious individuals, is scarcely, however, applicable to the medical student. The necessary attendance upon lectures keeps,—or ought to keep,—his mind engaged for at least six or seven hours in the day, and renders application at his desk or his books much less necessary than in the case of the student of law, who must derive all his information from written authorities. In other words, in following a course on law—as usually conducted, and as meant by Lord Coke—the student himself is presumed to *read* for that number of hours; whilst, in following a course on medicine, he is lectured or *read* to, the amount of mental application being identical in the two cases. It is, moreover, the business of the medical professor to lighten the labours of the student. It is for him to collect and condense the existing knowledge of the subject he teaches, to explain away difficulties, and to suggest materials for reflection—trains of thought—that may tend to expand the minds of his hearers; but this reflection and these trains of thought ought to accompany the well devised lecture, and the chief labour of the evening should be, to embody the information, that has been acquired through the day, and to investigate the facts and arguments on which

it reposes. The period for more extensive reading succeeds to the collegiate career. It is then a luxury, on which the well constituted mind hastens to banquet, and which it never cloy.

At the commencement of his attendance upon lectures, the student always experiences more or less difficulty in so employing his time, after the labours of the day are over, as to reap the greatest possible benefit. He is apt to fly from one subject of thought to another without settling down upon any; and their multiplicity confounds him, so that he concludes they are invincible. Let him, however, take them calmly, and in regular detail for a few weeks, and he will be astonished at the facility with which he stores away that, which once seemed to him so formidable. The excuse of want of time is rarely valid; and he who avails himself of it, if he examines his conduct, will discover, that it is not the *want* of time, but time *mis-spent*, which he has to deplore. He may be occupied from morning till night; but like as solitude—a “populous solitude”—may exist in cities—“midst the crowd, the hum, the shock of men,”—so may idleness be conspicuous in the midst of apparent occupation. The man, who has been accustomed to spend a certain number of hours in a given employment, will while away the same time should his business be reduced one half, and yet he may believe himself equally engaged, and would spurn the appellation of ‘idler.’ In like manner, we may be seemingly busy in confirming truths well established, and in upsetting positions, by common consent abandoned: we may employ ourselves in

scientific experiments, which may not add one solitary idea to those universally received; may desire to be regarded as industrious promoters of science, and be shocked to be thought mere *idlers*. Yet, if we examine—as utilitarians—into the results of our labours, we cannot, or ought not, to cavil at the judgment. “Amongst those,” says Dr. Samuel Johnson, “whom I never could persuade to rank themselves with *idlers*, and who speak, with indignation, of my morning sleeps, and nocturnal rambles, one passes the day in catching spiders, that he may count their eyes with a microscope; another erects his head, and exhibits the dust of a marigold, separated from the flower with a dexterity worthy of a Leeuenhoek himself. Some turn the wheel of electricity; some suspend rings to a loadstone, and find that what they did yesterday, they can do again to-day; some register the changes of the wind, and die fully convinced, that the wind is changeable. There are men yet more profound, who have heard, that two colourless liquors may produce a colour by union, and that two cold bodies will grow hot if they are mingled: they mingle them, and produce the effect expected; say it is strange, and mingle them again.”

In the way to study,—as in the way to wealth,—fractions must not be disregarded. It is a trite, but a wise maxim,—that if we take care of the pence, the pounds will take care of themselves; and the parody is no less just,—that if we take care of the minutes, the hours will take care of themselves also. It is surprising what may be accomplished by seizing upon every interval for study, and by disciplining the mind

to the effective exercise of its powers. If the student succeeds in this, but little nocturnal application will be necessary to treasure up the materials of science, whilst if he commences with attempting too much,—like the improvident racer, who puts forth his full strength at the onset,—he may find himself distanced by competitors, who have been more prudent of their forces, and yet who may not excel him in abilities. In the one case, too, he incurs the risk of injuring his health by collateral irregularities; whilst, in the other, study becomes—not a toil but a pleasure. He has “a time for all things,” and if a portion of that time be employed in recalling, and investigating the knowledge daily derived from his instructors, and in deducing the lessons of wisdom from such knowledge, it will be well spent. There is, indeed, as Dr. Latham has urged, a wide distinction between knowledge and wisdom, although a certain portion of the former may be necessary to the latter,—a distinction which has been well pointed out by the great moral poet of modern times, and should be ever present to the mind of the student.

“Knowledge and wisdom, far from being one,  
Have oft’times no connexion. Knowledge dwells  
In heads replete with thoughts of other men;  
Wisdom in minds attentive to their own.  
Knowledge—a rude unprofitable mass,  
The mere materials with which wisdom builds,  
Till smooth’d and squar’d, and fitted to its place,  
Does but encumber whom it seems to enrich.  
Knowledge is proud, that he has learnt so much;  
Wisdom is humble, that he knows no more.”

COWPER.

In striving to reach the temple of science,—situate, as it is, at a giddy elevation,—the youthful aspirant will find the path often skirted with the fairest flowers, but occasionally sterile and cheerless, as it passes through the different zones of vegetation. Yet, by judicious perseverance, he will surmount, in succession, the “hills on hills and Alps on Alps,” until he ultimately attains the summit of his wishes, and from the magnificent portals of the temple is enabled to dispense health and consolation to the afflicted, and to look back, with pride and satisfaction, on the steadiness of purpose, which has enabled him to overcome the toils and the difficulties of the ascent.

As aids to memory, whilst the student is attending lectures, some are in favour of his taking copious notes. To this course there are weighty objections as regards students of every standing, but, *à fortiori*, as respects the junior. Whilst the student is endeavouring to record one fact, or one train of reasoning, of importance, a number may escape him; and every one, who has had experience in this matter, knows, that it requires an education to enable the student to seize upon the prominent points of a discourse. It is said, that at an inspection of a respectable college in England, and in the class of chemistry, conducted by an accomplished and excellent professor, the committee had the curiosity to look at the notes taken by one student, when they discovered, that the only point he had noted was,—that “water will freeze.” This was not, necessarily, an evidence of defective intelli-

gence on the part of the student; it might have been mainly owing to his having begun to take notes at too early a period of his collegiate attendance, and before he could discriminate, and lay hold of the most prominent subjects.

Catchwords, or short sentences, written down at the time they are delivered, or afterwards, so as to attract the attention of the student, when he reconsiders the events of the day, may be advantageously used from the very commencement of attendance upon lectures; but no attempt should be made to record every thing, that the professor says. Such a course always interferes with the due exercise of the memory, and with after reflection, independently of other disadvantages that attend it.

Another objectionable plan—which prevails more largely perhaps than the one just animadverted upon—is that of attempting, before retiring to rest, to read over all the subjects on which the various professors have lectured during the day, in the pages of some text book, or approved author. According to the common course in our medical colleges, six or seven hours of the day are devoted to lectures; one to hospital attendance; and, occasionally, one to clinical lectures, besides the time, that is occupied in the department of practical anatomy. This, of itself, is sufficient daily employment for the student, if the time be well spent. If he has carefully followed the professor in the statement of facts and arguments, his mind must have been kept upon the stretch for almost as long a period as it can be engaged profitably. He should not attempt to devour more intellectual aliment than he can well dis-



pose of. Let him rather digest that which he has received through the day, and refer to his books, should his memory or reflection fail to serve him adequately upon any topic. The time for examining and reconciling conflicting opinions must occur at a future period. It should be postponed until there is sufficient leisure for the inquiry.

The author has had extensive experience on this point, and he has no hesitation in affirming, that those students, who have followed the plan here recommended, have risen pre-eminently above such of their fellow students, as have appeared to be situate alike in other respects, but have pursued the objectionable course of attempting to cram the mind with more than it is capable of receiving,—or of assimilating, if received.

All the studies, which, by common consent, form the curriculum in our medical schools, are of essential importance. They ought, indeed, to be esteemed to merit equally the devoted attention of the student. The very fact, that they are prescribed, ought to be enough with him, and no comparisons should be instituted, during the period of collegiate attendance, as to their relative value when he becomes a practitioner. On these topics, indeed, the student is but ill qualified to judge; and he is apt to receive partial opinions from older individuals, founded, too often, on particular biases, or on the greater or less acquaintance or familiarity with certain departments of the science, rather than with others. If practice were alone consi-

dered, the practical departments—medical, surgical, and obstetrical—ought to claim the precedence; but, to be well acquainted with these, absolutely requires an adequate knowledge of the others. To the young student, the department of *Anatomy* is one of the most attractive. It ministers to his curiosity. It makes him informed respecting his own organization. It demands, chiefly, the exercise of memory,—requiring but little reflection; and he, therefore, discovers, as in acquiring a new language, that he is daily adding to his stock of positive information. These remarks apply, however, to descriptive anatomy only. The other divisions of the subject—especially general and transcendental anatomy—require mental qualifications and exertions, which many do not possess; and, therefore, they are considered dry and useless, and meet with but little favour, except from the advanced student. He is esteemed the best anatomist in the class, who is acquainted with the names and situations of the greatest number of organs and parts of organs. And how needlessly are the different portions of the organism divided and subdivided! and what a waste of time in directing the serious attention of the student to insignificant points, the recollection of which may be a good exercise for the memory, but can be of little or no advantage in after life. The sphenoid bone, for example, seated at the base of the skull, has various projections from its circumference, to all of which names have been assigned; yet to the physician or surgeon, in the practice of his profession, the knowledge of most of these is wholly useless. No case can arise, in which this minute topographical division can assist him.

Anatomy is universally admitted to be the basis of medical education; but it is only the basis. Without a proper acquaintance with this department, it would be difficult, if not impracticable, for the student to comprehend fully the functions of the different organs of the body; their disordered actions, and the mode of treating such disorders with full advantage. To the surgeon it is indispensable, that he should be intimately acquainted with the absolute and relative situation of the various organs,—constituting what has been termed ‘Surgical, or Topographical Anatomy.’

Although, however, a close connexion exists between organization and function,—the existence of the former being necessary to that of the latter,—the nicest attention to the anatomy of an organ will not teach the nature of the function, which it executes. We have an accurate knowledge of several parts of the human body, whose offices are wholly unknown. We know the eye anatomically, as perfectly perhaps as is practicable: the structure of the tongue is entirely familiar to us, yet the nicest dissection of these organs does not explain to us how the former is capable of conveying to us our visual ideas of external objects; or how the latter can enable us to discriminate between the flavours of the various sapid bodies that are presented to it.

It has been already remarked, that if the time and opportunities of the student will permit, it would be well for him to follow one course of lectures on descriptive anatomy before he dissects; but, if unable to do this, his attention may be devoted to practical anatomy simultaneously with his attendance upon the

lectures. One thing is clear, that no course—or number of courses—of lectures can make a man a practical anatomist. Nothing but the use of the knife, and the careful dissection of the different parts of the frame—in the first instance, under a competent instructor—can convey to him that information, which he ought to possess when sent abroad with a license to pursue his profession *practically* as a physician, and particularly as an operative surgeon. The authorities of some of the medical schools have therefore wisely required, that no young man shall present himself for graduation, who has not attended at least one course of anatomical dissections.

Not many years ago, the study of anatomy in the schools was restricted to a simple acquaintance with the different organs as exhibited on dissection, and if the student could point out the various prominences, and demarcations of the bones, muscles, &c., he was looked upon, even by the teacher, as an accomplished anatomist. The verbal memory was taxed to infinitude, whilst the higher powers of the intellect were suffered to lie dormant, and the beautiful, but mysterious, investigation of the intimate nature of the different tissues, and their mode of formation was totally disregarded. During the present century, however, more especially, the science of anatomy has been made to embrace new grounds. ‘General Anatomy,’ as it has been termed—for which we are principally indebted to the illustrious Bichat—includes these interesting topics of inquiry; and the anatomist now travels unhesitatingly into regions, half a century ago unknown

to the scientific world. It is general anatomy, or histology, that teaches us the intimate texture and arrangement of the different organs, their correlations, the origin and formation of the human body, the character of its numerous constituents, and the changes, that supervene in the different stages of existence.

The same diseased action, affecting different tissues, may occasion symptoms of the most varied character. If the morbid condition of vessels, constituting inflammation, takes place in the cellular membrane, it gives rise to phlegmonous inflammation, of which the ordinary boil or abscess is an example. If it attacks the skin, the resulting inflammation is erysipelatous. How different, again, in its symptoms, progress, and termination, is the inflammation of the serous from that of the mucous membranes!

Without an attention to histogeny or to the evolution of tissues and organs, it would be impossible for the pathologist to comprehend the diseased conditions, that occur at different stages of existence. At particular ages, or in certain states of evolution and modification of structure, there is a tendency, in particular organs, rather than in others, to assume a morbid condition. This is strikingly exemplified in the supervention of hemorrhage at different ages. Whilst hemorrhage from the nose is very common about the period of puberty, it is more apt to occur from the lungs during the age of adolescence; and after this period, the tendency is again to the head or to the abdomen.

A knowledge of the correlation of organs is all-important to the pathologist. Hepatitis or inflammation

of the liver,—enteritis or inflammation of the bowels and gastritis or inflammation of the stomach, may all be varieties of inflammation of the peritoneum; yet how much the symptoms vary from those of peritonitis or of common inflammation of the peritoneum, owing to the functions of the parts, situate beneath the peritoneal covering of the liver, bowels, and stomach, being modified through this correlation! All these topics are elucidated by an attention to general anatomy.

Of late, attention has been directed to a mode of studying anatomy in relations of a deeply interesting character, which were at one time wholly overlooked. To this branch the name 'philosophical' or 'transcendental' has been applied. It embraces a knowledge of the relative importance of organs; their presence or absence in the animal series; the study, indeed, of living beings throughout the whole chain,

"Each moss, each shell, each crawling insect;"

and from such study to deduce great general analogies, and fundamental laws, that may be applicable to all. For example, it is generally maintained, that the existence of a placenta and umbilical cord is indispensable to foetal nutrition. As a general rule, these parts are present; and, in the opinion of most physiologists, no other function exists for them than that of being the receivers and conveyers of the blood of the mother to the child, and of returning that of the child to the mother, when it has administered to the nutrition of the former. Now, if the placenta and umbilical cord



were always present, when a living child is born, and in every animal, the inference would be irrefragable, that such are their functions; but transcendental anatomy teaches us, that children have been carried to the full term in utero, and have been born alive, and in vigour, who had neither the appendages of placenta nor umbilical cord; and comparative anatomy farther instructs us, that in the kangaroo, the opossum, the wombat, &c. they never exist. We, therefore, infer, that the placenta and umbilical cord are not indispensable to foetal nutrition, and to this deduction we are led by inquiries appertaining to 'transcendental anatomy.'

The labours of the French and Germans, more particularly, have been devoted to these 'transcendental' inquiries, and although we may be frequently disposed to smile—and with reason—at some of the generalizations suggested by transcendentalism, the ingenuity displayed on many subjects has furnished materials for reflection to the inquiring mind, and has suggested investigations, which might otherwise have wholly escaped attention.

They have led the reflecting anthropologist to a knowledge of the surprising uniformity that prevails in the organization of animated nature,—the wonderful, but all perfect simplicity, that characterizes the works of the almighty Architect,—and, in many instances, to comprehend the existence of parts, which are apparently useless in a particular species or individual, but which are capable of being called into activity under favourable circumstances. In this way, the

labours of the transcendental anatomists, of modern times, have tended to elucidate the complicated human organism,—that “mighty maze, but not without a plan.” Transcendentalism, in anatomy and physiology, is engaged in daily throwing more and more light on the inimitable *plan*; whilst the *maze* is gradually disappearing under the influence of careful observation, and philosophical induction; and, although we may occasionally meet with suggestions which may appear to be *philosophy in sport*, we have the advantage, frequently resulting from them, that in sober minds they become *science in earnest*.

The branch of anatomical science, to which the pathologist is most largely indebted, is that which has been termed ‘*pathological*’ or ‘*morbid anatomy*.’ Since the inspection of the dead has been permitted, and practised, to a greater extent, the discrimination of diseases has been rendered more easy, and the prognosis and treatment have become more satisfactory. Not many years ago, a hue and cry was raised against every one, who violated—as it was conceived—the sanctuary of death, and the anatomist was exposed to the most wanton insults and outrages. But the community have become more enlightened; and although, in some parts of the Union, legislative impediments may be thrown in the way of the anatomist, but few cases exist of a feeling so far behind the spirit of the age, and still fewer in which the pathological inquirer, who may desire to investigate the morbid appearances in any unfortunate case that may have fallen under his management, is refused assent. Such objections, it

need scarcely be said, ought never to exist. No professional man of character will request to examine a body, unless the object with him is one of importance, as regards the views he may have taken of the nature of the malady, or as an aid in the discrimination of similar morbid conditions. Philanthropy would suggest, that, in all such cases, the permission should be granted. By dissection, we are enabled to observe the morbid appearances in any fatal case, and to compare them with the symptoms that were present during life; whence, by careful analogy, inferences may be deduced, which may enable us to detect similar diseases when they occur, and to treat them successfully. But, independently of these benefits, the mourning relative should bear in mind, that many diseases are of a family nature, and that, by careful inspection of one fatal case, the family physician may have his judgment so strengthened as to succeed in warding off a similar attack, should it threaten another of the family,—when, without the instruction afforded by his pathological investigations, he might have failed, and the life of a second member of the family might thus be sacrificed to the unfortunate—but amiable—prejudice.

Every where the difficulties thrown in the way of pathological anatomy are yielding. The press teems with the valuable contributions of the pathological anatomist; and some few philanthropists have gone so far—in their desire to remove the prepossessions of those who are opposed to such investigations—as not only to direct their bodies to be opened, but to be dissected in the public theatre, and demonstrated for the benefit

of the student. Such was the testamentary request of the celebrated Bentham,—a request, which was faithfully executed by his friend Dr. Southwood Smith, of London, in the anatomical theatre of the school to which Dr. Smith is attached, and of which he is a valued ornament.

The student should omit no opportunity, that may offer—either before or after graduation—for *post mortem* examination; and, in every case in which he is permitted to carry it into effect, he will find, that he has made a satisfactory addition to his knowledge of the healthy and diseased conditions. Let him embrace every occasion for discriminating the appearances, which the parts present in health, from those which they assume under disease; and, in this way, he will be able to say what are healthy, what morbid, and what *cadaveric*,—that is, produced during, or after, dissolution; and lastly, let him be extremely cautious in referring the malady to the pathological lesion, which may be apparent on dissection. Often, he will be amply justified in so doing,—as where the symptoms have indicated inflammation of an organ, and evidences of such inflammation or its consequences appear on dissection,—but, in other cases, such an inference might be most unfounded; as where irregularity of the organic actions has persisted for days and weeks—in a case of remittent fever for example—and more or less inflammation is perceptible in the lining membrane of the intestines. Such inflammation ought often, perhaps, to be considered rather as a consequence of the exaltation and irregularity of the organic actions than as

their cause; and hence it is, that they are so common in those affections. Yet, if it should accord with the theory of any writer or teacher,—that inflammation in this or any other part of the economy is the essence of all fevers, and, on dissection, evidences of such inflammation should be apparent,—the student—whose mind has not been sufficiently trained by observation and reflection—is apt to give almost involuntary assent to the doctrine, and future observation is long in rectifying the error. The author is in the habit of examining the cavities of the abdomen and cranium in diseases, where mischief in the abdominal and cranial viscera has not been suspected; and he has rarely failed to observe appearances in the lining membrane of the alimentary canal, which a reckless or inveterate theorist might have invoked as ‘confirmation strong,’ did his views lead him to place the primary seat of disease in this portion of the economy.

In the different medical schools, where opportunity exists for clinical instruction, care is taken to exhibit the morbid appearances that present themselves, and to render the student acquainted with those that belong to different diseases. At the Philadelphia Hospital, this is done at the close of every clinical lecture.

On the importance of an acquaintance with *Physiology*,—or with the functions of the frame, as executed in health,—it is scarcely necessary to dwell. It is to existing observers, that this deeply interesting and valuable department of medical knowledge owes most of its improvements. Physiology may, indeed, be re-

garded as a new science, and as the source of numerous important improvements in the healing art, of recent introduction. The medical press teems with new productions of value. Germany led the way; France followed in her footsteps; and the nations of the Anglo-Saxon race succeeded; all vying with each other for the advancement of this important branch of the science. We hear no longer of such questions as were propounded by the learned and the quaint Sir Thomas Browne—whether, for example, a woman could be impregnated by bathing in the water that had been used by a man a short time previously; and if we occasionally meet with instances, like those afforded by M. Richerand, one of the most fanciful of modern physiologists—who is disposed to believe, that the reason why the languages of northern Europe contain more consonants than those of the south, is, that the mouth may not be too widely opened, and thus the cold air be prevented from getting, in too large quantities, into the stomach!—we mark them down as mere individualisms, which have no influence in the steady forward course of the science.

It is to the want of a due knowledge of the healthy functions, that we must ascribe most of the errors, which have prevailed in therapeutics, and which still prevail in the practice of those, who adhere to old notions, or who have not taken the necessary steps for keeping pace with the rapidly advancing condition of medical science. Who, indeed, can honestly profess to know the signs that indicate the diseased state of an organ, if he be utterly ignorant of the healthy main-



festations? The science of physiology must, therefore, be an important object of study with every one desirous of distinguishing himself in his profession. A stimulus is now applied to the indolent physician, which did not formerly exist. The public are aware of the importance of attending to this "proper study of mankind." In France, a competent knowledge of Animal Physiology and Zoology is required of every candidate for university honours. The university of London has introduced it into the course of study required for the degree of Bachelor of Arts. In the High school of this city, (Philadelphia,) it is regularly taught, and it forms part of the scheme of instruction in many of the academies of this country. The members of the bar, too, every where, find the utility of having paid some attention to it, in many of those intricate cases of forensic medicine, which so often agitate our halls of justice. This extension of the study of physiology cannot fail to exert a salutary excitation on those of our profession who are disposed to be idle and listless; for what man of character could brook to be excelled, by the unprofessional, on topics, which so eminently belong to his course of study, and without which it is impossible for him to be a learned and truly useful physician!

It has been well remarked, by an intelligent writer, Mr. C. T. Haden, on the best modes of improving the study of the several branches of medicine, that the crying defect of the British anatomical schools—and the remark is applicable elsewhere—is, that they teach anatomy as if a knowledge of the *dead* body were the sole founda-

tion of medical study; whereas it is a knowledge of the *living* body, which constitutes that foundation; and, therefore, it is not the parts of the body themselves, as they lie exanimate on the dissecting table, which are of importance, but the actions and functions of those parts, as they administer to the wants of the living man; and, hence, that physiology, or "living anatomy," —*anatome animata*, as Haller appropriately termed it— is the real foundation of medical knowledge; and anatomy, in this view, is only requisite, inasmuch as, before the functions of a part can be comprehended, its structure must be examined and understood.

"Let it be borne in mind," says a still more recent writer (*British and Foreign Medical Review*, July, 1840, p. 191) "that anatomy furnishes, towards the establishment of the *principles* of medicine, only one set of facts, the value of which will depend entirely upon the relations developed between them and others that are brought to bear upon them. To examine *structure* without inquiring into *function* is in this point of view totally valueless; and to a scientific knowledge of function an inquiry into the influence of external agents upon the organism is just as important as that of the structures of the organism itself. Could any one understand the actions of a steam engine who contented himself with investigating the structure of its several parts or organs, in ignorance of the expansive power communicated to water by heat, and the condensation effected by cold; and would any one choose to commit the repair of a complex and delicate watch to a workman unacquainted with its principles of action, how-

ever excellent he might be as a mere mechanic? There are those who think it a necessary preparation for the practice of the medical profession, that the pupil should get by heart the contents of every cubic inch of flesh in the human body, and who could descant at length on the utility and even indispensableness of such knowledge; but it must not be forgotten, that others could talk as plausibly in favour of a complete course of classical study and of chemical manipulation.”

After all—as respects anatomy—the student’s main attention, during his collegiate course, will necessarily be devoted to the practical and topographical departments. He will have to make himself familiar with every essential anatomical constituent of the body, and will be especially careful in attaining an accurate knowledge of the relative situation of parts—to enable him to undertake the different surgical operations, which he may be called upon to perform at a moment’s notice. The valuable information, which may be conveyed by the lecturer on the other branches of anatomy, must be treasured up for subsequent reflection; and if the student employs his time to good purpose, he will daily find opportunity for pondering upon them, and impressing them on his memory. If the study of any of the ramifications of the subject be postponed, it had better be the last mentioned,—inasmuch as the purely practical departments can only be acquired where the requisite facilities exist.

The mode, in which the *Practice of Physic* is usually taught, is replete with difficulties to the student. In-

stead of giving the symptoms that are pathognomonic or characteristic, the teacher generally goes over, under each disease, the symptoms that belong to the class. This is a fault, which likewise exists in most of the treatises on the subject, and which the author had constantly in mind, when preparing his own *Practice of Medicine*. Thus, under inflammation of an internal organ—say of the liver—we find too often enumerated all the symptoms, that are present in every form of inflammation, along with those that belong to the particular affection; and this detail is repeated under each variety of internal inflammation—a repetition, which occasions great confusion in the mind of the student, and induces him to consider, that the whole subject of semeiotics is an affair of mere memory; whilst, if his attention had been restricted to the physiology—sound and morbid—of the organ, the symptoms, common to the different cases, would generally suggest themselves on slight reflection.

In like manner, remedy after remedy is recommended without the rationale of their action being explained, or even hinted at. Hence it is, that a distinct department of *Therapeutics* is so essential in our schools;—a department, in other words, which treats of the great general principles involved in the *modus operandi* of remedial agents, and of their application to the diseased condition. This is commonly associated with materia medica or pharmacology, to which it is made subordinate. It is, however, of at least equal importance with the latter, and is easily separable from it. Materia medica teaches the properties of the tools or

agents with which the physician has to fulfil his remedial indications, whilst therapeutics establishes those indications, and points out the mode, in which such agents can be applied with the greatest advantage.

Preventive medicine, or *Hygiène*, is a branch of therapeutics, to which too little attention has generally been paid. It includes the *materia alimentaria*, or the effect of different kinds of aliment as respects their nutrient and digestible properties, and their adaptation in sickness and in health, and canvasses every topic, that relates to the *preservation* of health. It ought assuredly to form part of the curriculum of medical studies in every university; yet in this country, and in Great Britain, it has not usually constituted a distinct branch of medical instruction, although in the different practical chairs it may have been noticed in a detached manner. On the continent of Europe, however, it has been formed into a separate department;—the course being made to consist of lectures on public and private *hygiène*;—"public *hygiène*" being understood to comprise the study as it relates to man collectively, whilst "private *hygiène*" concerns him individually.

"The little regard," says Dr. A. Combe (*Principles of Physiology*, &c. New York edit. p. iii.) "which has hitherto been paid to the laws of the human constitution, as the true basis on which our attempts to improve the condition of man ought to rest, will be obvious from the fact, that notwithstanding the direct uses, to which a knowledge of the conditions, which regu-

late the healthy action of the bodily organs may be applied in the prevention, detection, and treatment of disease, there is scarcely a medical school in this country (Great Britain,) in which any special provision is made for teaching it; the pupil being left to elaborate for himself from amid information communicated to him for other purposes. In some of the foreign universities, chairs have been instituted for this purpose; and in France, a journal of *hygiène* has existed for a short time. But in this country, with the exception of Sir John Sinclair's elaborate *Code of Health*, and one or two other publications of a late date, the subject has never been treated with any thing like the regard which it assuredly deserves. In one point of view, indeed, the omission is not so extraordinary as it may at first sight appear. The prominent aim of medicine being to discriminate, and to cure *disease*, both the teacher and the student naturally fix upon that as their chief object; and are consequently apt to overlook the indirect but substantial aid, which an acquaintance with the laws of health is calculated to afford in restoring the sick, as well as in preserving the healthy from disease. It is true, that almost every medical man, sooner or later, works out this knowledge for himself; but in general he attains it later than he ought to do, and seldom so completely as he would have done, had it been made a part of his elementary education, to which he and others attach importance. In my own instance, it was only when entering upon practice, that I had first occasion to feel and to observe the evils ensuing from the ignorance which prevails in society in regard to it."



Every practitioner must have occasionally experienced the same embarrassments as Dr. Combe; and it was under feelings similar to those he has expressed relative to the utility of the department of hygiène, that it was introduced, at the suggestion of the Author, into the university of Maryland, as a part of the duties assigned to the chair which he once held in that institution.

Where no such chair exists, the only course left for the student is to peruse the best books on the subject, in the intervals between his winter courses of lectures.

It is in these departments, that we have to deplore the admixture of credulity, superstition, and faulty metaphysics, which so long disgraced the science of medicine. If we refer to the early history of our art, we are astonished to find the multitude of articles, that crowded the shop of the apothecary, were admitted into the catalogues of the *materia medica*, and, notwithstanding the testimonials in their favour, were—in a short space of time afterwards—discharged from them as injurious or inert. (See the Author's "General Therapeutics, and Materia Medica," p. 53. Philad. 1843.) A better attention to the *series implexa causarum*, and to their relation with effects, has been yearly exhibiting the false reasoning, which occasioned the admission of many of those articles; and, accordingly, the number has been gradually diminishing. The tendency still is—and must be—to a farther diminution, and to get rid of those agents that possess no advantages over others equally common, or of those whose properties are equivocal.

When we revert to the state of medical knowledge, not more than a hundred or a hundred and fifty years ago, and note the improvements that have taken place in the interval in every branch of it, we cannot fail to be struck with the difference, and can readily account for the numerous disquisitions, that have appeared on the uncertainty of medicine, and for the ridicule occasionally cast upon its professors by the various satirists. Medicine has always kept pace with the progress of the physical and moral sciences, and where these have been defective, or marked by folly and credulity, it has exhibited the same failings. Even so late as the time of Rousseau and D'Alembert, there was ample ground for the ridicule so frequently indulged by those, and other distinguished writers. "The following apologue," says D'Alembert, "made by a physician, a man of wit and philosophy, represents very well the state of that science. Nature is fighting with disease; a blind man, armed with a club,—that is, the physician,—comes to settle the difference. He first tries to make peace; when he cannot accomplish this, he lifts his club, and strikes at random; if he strikes Nature, he kills Nature."

At that time, however, in the country in which D'Alembert wrote, the art of medicine—in the case of most of the fraternity—was enveloped in mystery and empiricism, and, too often, in fraud and imposture. Until a comparatively recent period, the doctrines and precepts of Hippocrates were reverentially followed; and the most degraded attention was paid to authority and established routine. Molière has properly casti-

gated this folly in his *L'Amour Médecin*, in the dialogue maintained between the physician Tomès and the maid Lisette.

*M. Tomès.* How is the coachman?

*Lisette.* Very well. He is dead.

*M. Tomès.* Dead?

*Lisette.* Yes.

*M. Tomès.* That is impossible.

*Lisette.* It may be impossible, but it is so.

*M. Tomès.* He cannot be dead, I say.

*Lisette.* I tell you he is dead and buried.

*M. Tomès.* You are mistaken.

*Lisette.* I saw it.

*M. Tomès.* It is impossible. Hippocrates says, that such diseases do not terminate till the fourteenth or twenty-first day, and it is only six days since he was taken sick.

*Lisette.* Hippocrates may say what he pleases, but the coachman is dead."

Molière died about the commencement of the last century, and although his art had, doubtless, some effect in rectifying that, which should have yielded to sober reflection, his censures were well merited a century after they were written, and they are by no means devoid of application at the present time. It is but recently, that the minds of many were usurped by the notions of a celebrated systematist, whose dicta were—and still are by some—regarded as canons; yet how few, at this day, pride themselves on an adherence to

his views, and how small is now his influence even in the very seat of his scientific exertions. Still, others have arisen, and are arising, to whom the same kind of homage, as masters, is paid; whose inculcations are received as indisputable authorities; and, mainly, because it is easier to embrace the views of a leader, and to find support under his responsibility, than it is to work out a path of our own.

Of late years, great advancement has taken place in the more purely practical parts of the profession. Instead of attending—as is too often the case with the mere routine practitioner—to the more prominent symptoms of disease, and attempting to remove them, the inquiries of the scientific physician are now directed to the pathological condition of the suffering organ; and on this all his rational indications of treatment repose.

Of the valuable auxiliaries in the discrimination of disease,—the gifts of modern times,—one of the most so is that of ‘Auscultation’ or listening—with or without the stethoscope—the invention of the late eminent French pathologist and professor, Laennec. By this simple instrument, the physician is enabled to obtain audible evidences of the state of the lungs, and the heart, not to be acquired in any other manner. They who have listened attentively and repeatedly are alone able to appreciate the information it is capable of conveying, especially in that intractable malady—intractable in its advanced stages at least—pulmonary consumption. It is now well established, that if relief is to be experienced, in this dread disease, by any change

of climate, the remedy must be had recourse to, before the malady has made such progress, that cavities have formed in the lungs, or before it has become—what has been called—‘confirmed.’ In detecting whether this unhappy advancement has taken place, auscultation is one of our chief guides; and if it should indicate the presence of abscesses or cavities in the lungs, the physician assumes a fearful responsibility, in advising a patient to incur all the evils of expatriation—the inconveniences dependent upon a removal from family and friends—under the delusive—the forlorn—hope, that a warmer or more equable climate may repair the mischief—alas! irremediable. (See, on this subject, the author’s *Human Health*, Philad. 1844.) How important, then, to be able to discriminate, whether the lungs are yet in a state to admit of well-founded expectations of benefit from change of climate; and how valuable the means of diagnosis or discrimination, which aids in substituting certainty, or a high degree of probability, for doubt, in cases where the steps of the sufferer, and of anxious relatives, are to be guided by the decision of the practitioner; and where such decision is to be attended, on the one hand, with prostration of their hopes; and, on the other, is to subject them to all the inconveniences of a distant, and often uncomfortable pilgrimage!

In learning auscultation, it is important, that the student should commence upon healthy individuals, and especially upon children, in whom several of the auscultatory phenomena are well exhibited. Many of

the erroneous diagnoses which have been given by observers in particular cases have had their origin in the dogmatic assertions of those who have not understood the different characters of the sounds heard in health, in different individuals, and in the same individual, under different circumstances. After the student has acquired an accurate knowledge of the physical signs in health, he may pass with full advantage to their examination in disease.

In respect to the best method of profiting by the *Clinical course*, a great deal will depend upon the method adopted by the professor,—as to the plan the student should pursue. Too often, perhaps, the clinical instructor selects the singular, and the striking, rather than the common, and more useful cases; and it has fallen to the lot of the author—as it must have done, more or less, to every one—to have had his attention directed chiefly to cases, during his period of hospital attendance, which he has rarely or never met with since. The object of the clinical professor should be to select mainly those cases, that must necessarily present themselves to all in their ordinary course of practice; to inquire aloud into the history of the case, and, at a fitting opportunity, to explain the etiology, semeiotics, diagnosis, prognosis and treatment adapted for the particular case, and for the class to which it belongs;—attracting the attention of the student to the more prominent points. With these views, acute cases should be first considered, as being most common and urgent; and, afterwards, the more chronic. The young student is generally disposed to be over active in his



treatment, and, if one remedy does not appear to be producing all the effect he anticipated, he is apt to fly at once to another; but if the professor be judicious, the student will soon learn that infinite mischief may be done in this manner, and that more reliance has to be placed upon the recuperative powers of the system, than he may have been disposed to imagine. It will be well for the clinical pupil to keep a journal of such cases as may merit the trouble; and never to permit an occasion to slip for verifying or disproving, by dissection, the views which he or his teacher may have been led to form of the precise nature of fatal maladies.

In the hospitals that are connected with extensive medical schools, it is impracticable for the numerous students to accompany the clinical teacher from bed to bed, with any advantage; and hence the plan in the Philadelphia Hospital has been to select cases for clinical investigation, and to remove them from the wards into the lecturing room of the establishment. In this mode, a large array of cases cannot be presented; but the lecturer can select and employ them to elucidate the observations which he desires to make upon any disease; and the student is thus able to obtain in epitome, in the course of the session, a view of all the most prominent diseases that fall under his attention or practice, illustrated by appropriate examples. An impression is thus made upon the mind, which is not readily effaced.

The study of *pathology*, not inappropriately termed "diseased physiology," can be well undertaken, whilst the clinical course is being pursued: or, if the student

be unable to avail himself of clinical instruction during the summer between the two courses of lectures, he may study any of the modern works on general pathology, and therapeutics. Under pathology are comprised, by many, morbid anatomy, etiology, and general therapeutics, nosology, and symptomatology. "To the study of these," says a recent writer (*Brit. and Foreign Med. Review*, July, 1840, p. 192) "concurrently with that of actual phenomena, we would have the pupil give his almost undivided attention during the second summer session; and under the guidance of a judicious instructor he may pursue this as well from books as by attendance on lectures, when at least such books, as we should wish to see, shall be in existence." The same writer properly remarks, that an inquiry into this subject will show how small a part of the real science of pathology morbid anatomy is, and how much attention needs to be given to the phenomena of disease as manifesting themselves during life, before we can become scientifically acquainted with it. "It is necessary to bear in mind the distinction between an elementary or simple morbid action considered in itself—such as inflammation, and that train of sympathetic phenomena resulting from it, which constitute what is commonly regarded as the disease,—the symptoms being mostly due to the latter. In order to appreciate both properly they must be studied separately, and the groups of phenomena, which manifest themselves under the joint influence of both may be afterwards detailed. The nature of the action itself having been discussed, its results should be inquired into; and here it is that mor-

bid anatomy becomes most useful. But that the information which it imparts is at best very imperfect is evident from this, that violent diseased action may have existed during life without leaving any traces perceptible to attentive scrutiny, if its duration has not been sufficient; and that, on the other hand, appearances may often be discovered after death, which have no relation with any diseased action occurring during life, and which nothing but a very sound discrimination can distinguish from those which are really indicative of it. Moreover, there can be no doubt of the existence of many diseased actions, which anatomical skill has hitherto failed to detect, and which will probably long continue stumbling-blocks to the pathologist. This is especially the case with those in which the nervous sympathies are much involved. Farther: it is now generally admitted, that the first departure from the healthy state generally, if not always, exists in the fluids of the body, and especially in the blood, and a thorough examination of these microscopically and chemically, in every case, would, if it were possible to make it within a short time after the extinction of life, undoubtedly throw as much light on the nature of disease as the examination of the structural changes in the solids."

The remarks that have been made on *medical*, apply equally to *surgical*, pathology. The operative department requires, however, a distinct consideration. In well devised lectures on operative surgery, all the operations are exhibited, and illustrated by a demonstra-

tion of the parts concerned. The diversified instruments and apparatuses of modern surgery are shown to the class, and their uses explained; yet the student should lose no opportunity for repeating the operations on the dead body, and, although this is by no means the same as operating on the living body, amidst the effusion of blood, and the sufferings of the patient, an intimate acquaintance with the relative situation of parts, derived from surgical dissection, places the operator comparatively at his ease, under the most trying circumstances. In some of our medical institutions, not only has the student the opportunity of attending the lectures of the professor of surgery; but it enters into the plan of instruction, to teach him the most improved methods of performing surgical operations, while he is engaged in prosecuting his dissections under the guidance of the demonstrator of anatomy,—an arrangement adapted for frequent illustration of those operative details, with which practice alone can make the student familiar.

In the present improved condition of surgery, in all its branches, the philanthropist finds much to excite his warm admiration. The major operations have been simplified by the invention of appropriate instruments, and the bold daring of the modern surgeon has led him to perform operations which were totally unknown, even in the middle of the last century;—for example, the ligature of the larger arteries, in cases of aneurismal diseases, which, at one time, would have been permitted to run their course to a fatal termination without interference, but are now controlled by

the discoveries of modern science. It is not only in the operative part, however, that the advancement of surgery is manifested. The skilful and benevolent surgeon has more gratification in saving a limb, which has been doomed to the knife, than in his most brilliant operations. There was a period, when every compound fracture was considered to require amputation; and this sentiment prevailed until within a comparatively recent period. At this time the contrary doctrine is maintained, and few cases are now subjected to amputation, unless supervening circumstances should render such a step imperiously necessary. To know whether a severe and dangerous operation is demanded, is one of the most difficult parts of the surgeon's duty,—far more so than the operation when once determined upon. Yet, the public,—who are in general but imperfect judges of professional merit,—are infinitely more impressed with the success of an operation—which, perhaps, ought never to have been undertaken—than by the skilful and humane exertions of the surgeon to render such operation unnecessary. The author well recollects the *éclat* obtained by a surgeon for performing the operation of the trephine, in a case of fracture of the skull, with slight depression, *unaccompanied with a single symptom of injury of the brain*; although, if fatal mischief had resulted from the operation, it might have been a question, whether the operator would not have been amenable, in a court of justice, for the injury he had inflicted;—as no principle is better established, than that the trephine should never be employed except for the removal of existing

bad symptoms, or of conditions which must render the occurrence of such symptoms almost inevitable.

The community at large are fond of the exhibition of activity by the physician or surgeon, and this feeling has doubtless, at times, led a practitioner,—not possessed of extraordinary presence of mind or firmness of character,—to have recourse to measures of which his better judgment might not approve. Surgery is always a more popular branch with the student—and indeed with the *laity*—than medicine. Treating—as it does—the *morbi externi* or external diseases, it addresses itself more to the eye; its results are commonly palpable to the meanest capacity, and its agency is *heroic*, and generally successful, if not in *curing*, at least in *removing* the mischief. Hence it has been termed and regarded '*medicina efficax*.' "The adaptation of curative means," as Dr. Latham has properly observed, "requires more vigilance in medicine than in surgery. There is no end of the circumstances to be taken into consideration, day after day, in order to practise medicine with tolerable success. A man has an *external* inflammation; the surgeon sees it, and is at once sure of its existence; he prescribes for it, and sees its gradual decline as plainly as he first saw its rise and progress. A man has an *internal* inflammation; but the physician, not seeing it, is obliged to come to the knowledge of its existence by a great variety of considerations before he can know that it has begun to decline or has ceased. The uncertainty of physic I readily admit; but I do not admit the vulgar reproach



which has followed from it. There is nothing absolutely sure but what rests on the basis of numbers, or falls within the sphere of the senses. Where reasoning begins, there begins uncertainty; and on this account, the highest and the best things in the world are all uncertain, and so is our profession. But from this very uncertainty, those who practise it successfully claim their greatest honour; for where there is no possibility of error, no praise is due to the judgment of what is right."

To think deeply, and to reason correctly, is difficult for the young student; and he is, accordingly, too apt to permit his reflective powers to lie fallow; and to store up only, or mainly, those circumstances that impress his perceptive faculties. Hence it is, that operative surgery is usually so much more attractive to him than medicine; that is, after the first repugnance for surgical operations has been got over. "Surgery," as the same intelligent writer has remarked, "for the most part, requires fewer circumstances to bring you to a knowledge of its object than medicine does. In surgery there are prominent points of interest, which arrest and command the attention at once; in medicine, the points of interest are to be sought after, and, being found, are to be retained and cherished by much labour of the understanding;—external sores, external inflammation, and broken bones, requiring only to be seen and handled in order to be known. But the same knowledge, which, in surgery, is obtained by the use of the senses, in medicine, which is conversant with internal disease, can only be acquired by a process of

reasoning; and reasoning is more difficult than seeing and touching, and its conclusions are more uncertain, and much more liable to error."

Yet there are many cases, which fall under the care of the surgeon, that require the profoundest reflection, and the most accurate powers of observation. These cases, however, are not always the most popular with the student. A trifling operation attracts him from deeper studies; and it is not until he has become engaged in extensive practice, that he feels the loss of those hours which he had abstracted from the investigation of common pathological conditions, medical as well as surgical.

In country practice, surgical cases are unfrequent, and it was a common observation with the most distinguished of American surgeons, that even in our towns, in his time, there was not field enough for the full occupation of a pure surgeon,—that is, of a practitioner who restricts himself wholly to the province of surgery.

Perhaps, the recent establishment of "surgical clinics" in our schools, has pandered somewhat to this unfortunate taste, which is encouraged by the fact, that an occasional fortunate operation, at the outset of his career, often materially facilitates the success of the young practitioner. Let him bear in mind, however, that for one such opportunity of distinction, hundreds of medical cases will occur in which he may lose character, or feel his own insufficiency, provided he has paid too much attention to operations, to the sacrifice of medical and surgical pathology and therapeutics.

The department of *Obstetrics*—as generally taught in our schools—includes not only the practice of the art, but subjects that might be considered to appertain to other departments. It teaches, for example, the physiology of the pregnant and parturient states; embryology; as well as the different diseases to which the sex are subject; with the physiology and pathology of infancy, &c. &c.

The same method of studying these physiological and pathological topics is demanded as in the case of physiology and pathology in general. The practical part of obstetrics may be regarded as a branch of surgery,—the operations, at least, which are required, when the powers of the mother have to be aided, or when they are totally inoperative, from causes appertaining to her or the child.

There is but one mode, in which practical obstetrics can be perfectly taught; and that is by practice on the living female. Accordingly, wherever circumstances will admit, a lying-in hospital is attached to the medical school, at which opportunities are afforded for the student to officiate as accoucheur, under the guidance of an *expert*. In this country, this desirable appendage to the obstetrical chair does not always exist; but, in Europe, it is rare to find one unprovided. Generally, the students are divided into classes, which are summoned in turn; and, in France, towards the termination of labour, the clothes are thrown up, and as the woman is delivered on her back, and on an inclined plane, full opportunity is afforded for witnessing the mode in which the extrusion of the fœtus is accomplished.

Similar opportunities exist for 'touching' or exploring the condition of the uterus during the different stages of pregnancy, and, thus, for enabling the young physician to verify or disprove the existence of pregnancy in doubtful cases,—a topic, which,—since the introduction of the stethoscope more especially,—has been full of interest, in a practical point of view, to the obstetrician.

In schools, to which a lying-in establishment is not an adjunct, the student should embrace every opportunity for noting the different presentations on the 'mannekin;' and for rendering himself familiar with the various obstetrical instruments, and their application. The young practitioner is apt to become confused, if, in applying his forceps, the locking parts of the blades do not correspond. Familiarity with the instrument, which can be acquired by very slight attention, will prevent this; and if he practise frequently on the mannekin, he will not have much difficulty in the adaptation of his knowledge to the living female.

In certain of the medical schools, *medical jurisprudence* is associated with obstetrics; yet the only reason which can be assigned for this is, that a few questions of a medico-legal character,—infanticide, for example,—concern those whose diseased conditions the obstetrician is often called upon to treat, and with whose normal state it is to be presumed he must be better acquainted than one engaged in general practice. Still, the train of observation and reasoning necessary in medico-legal inquiries is by no means of the restricted character re-

quired in that department of the art. To be a good medical jurist demands, indeed, that the individual should be well instructed in the whole science of his profession, with all of which it has most important bearings; and hence it would be a better appendage to the department of institutes of medicine. It has been urged, indeed, against making medical jurisprudence a part of the curriculum of medical education, that it requires the witness to be well acquainted with all the other departments, and that, if he is, he cannot fail to be a good medical jurist. Yet the celebrated John Hunter, from not having considered well the different bearings of a well known case on which he was called to give testimony in a court of justice, experienced exceeding embarrassment, and by no means sustained his exalted reputation. The general practice of the schools is, for the professor of obstetrics to touch upon those parts of medical jurisprudence that are connected with his department; whilst the professor of chemistry examines the more important toxicological bearings, and the professor of institutes of medicine inquires into those that seem to appertain more especially to him. In the absence of lectures on the subject, the student may peruse, with eminent advantage, the excellent works that are readily attainable; but this can be done with greater advantage after he has been informed on the other departments of medicine; and there may even be advantage in postponing its investigation until after he has graduated.

The department of medical science, to which the

least importance is apt to be attached by the student, is *Chemistry*; and this accounts for the lamentable deficiency in chemical attainments, observable amongst students and physicians in general. The notion ought to be discouraged, and this would be easily accomplished, were the authorities of the medical colleges to require an adequate acquaintance with the laws and facts of chemistry as essential to graduation.

Many of the functions of the living body are carried on by chemical agency, and are incomprehensible without an acquaintance with that science. What student could understand the changes produced in the air by respiration, unless he had some knowledge of chemistry; or how could he comprehend many of the other functions that seem to be accomplished under chemico-vital influence? In like manner, the action of antilithics, antacids, and disinfectants; the knowledge of substances, that are compatible or incompatible in the same prescription; the action of antidotes, when poison has been taken,—indeed, the whole subject of toxicology, in order to be understood, requires an acquaintance with chemistry. The author well recollects a case of internal hemorrhage, treated by a practitioner by means altogether inert, in consequence of his ignorance on this point. He argued that sulphuric acid was a good astringent; that acetate of lead possessed like virtues; and that if he added the two together, he would have a compound possessing the medical properties of both; whereas, a tyro in chemistry could have told him, that the resulting compound in no respect resembled its components. A sul-



phate of lead was necessarily formed, which is insoluble and inert; the only medicinal result of the decomposition being the acetic acid, which could exert little or no therapeutical agency.

Of late, great attention has been paid to the applications of chemistry to pathology, and especially to the pathological state of the blood and other fluids; and now, that the horror of the humoral pathology has abated, and, indeed, almost vanished, fresh investigations will be made into its varying character in disease, and into the best methods for restoring it to the healthy condition.

*Practical* chemists can be best made in the laboratory; but, owing to the number of students who frequent the large medical schools, it is difficult to carry this course into effect. A very small apparatus is required for most of the experiments of a chemical and pharmaceutical character, so that they, who are desirous of being practically acquainted with the manipulations of the science may become so at a trifling expense.

The facts of chemical science are apt to flit from the mind, and require to be retained by repeated attention, especially as it is a department of science which is rapidly progressive in its character, and which assumes fresh aspects in successive years, as it is enriched by new discoveries. Within the last twenty years, the *materia medica* has received some valuable additions, from the labours of the French chemists and pharmacists more especially. The active principles of many energetic articles have been separated, so as to

allow them to be exhibited, without the inconveniences at times occasioned by the mixed matters with which they are associated in the vegetable. Hence, quinia often takes the place of bark; morphia, of opium; piperin, of the peppers; salicin, of the willow bark, and strychnia, of the nux vomica. Iodine, too, has, of late, assumed a rank amongst our useful therapeutical agents; and the deadly hydrocyanic acid has, under a wise form of administration, been adopted in medicine.

Under these various changes, how thunderstruck would one of the worthies, even of the last century—to whose opinions, perhaps, reverential deference was paid in his day—feel, if he were permitted to revisit this earth, and how inadequate would he be to resume his place in the profession, until he had undergone a previous education! Although, like the venerable patriarchs of all ages, he might sigh for “the good old times,” and doubt, that all the changes were improvements, he would find it necessary to renounce his ancient ideas, or consent to be honoured merely as a Rip Van Winkle relic of antiquity, in the very place in which he had been formerly looked upon as an oracle. A retrospective glance at the condition of medicine, in former periods, will exhibit to the student the unphilosophical ideas, that were generally entertained on many branches of medicine, in times not very remote, by the professional, and the unprofessional,—the learned as well as the ignorant; and if the inquirer compares them with the views at present indulged, he will discover, that the degrading superstitions, which at one time enthralled the mind, have been mainly abolished;

that a better system of physics and of metaphysics has elucidated the laws, which connect effects with their causes;—that an improved acquaintance with anatomy—general, special, pathological and surgical—along with the interesting truths and speculations of physiology, sound and morbid—have dispelled several of the illusions, “the children of an idle brain,” which at one time weighed on the science; that mystery has been discarded; that arcana no longer exist; and that the darkness, and complicated dogmas of the schools have yielded to a better mode of reasoning and experiment, so that what was formerly taught, and implicitly credited, as a saying of the master, is now rejected, unless it comes home to the comprehension and conviction of the student. If we compare, indeed, the state of the profession now, with what it was one hundred—nay fifty—years ago, and then cast our regards towards the future, the prospect is most cheering. Yet we must not form too exaggerated an estimate of the powers of science from its present improved condition. When the gigantic mind of Newton had developed the ‘new philosophy,’ the most unbounded enthusiasm was experienced, and, it was presumed, that the world would be filled with wonders. “The glorious undertakers,” says Glanvil—who was one of the earliest members and promoters of the Royal Society of London—“wherewith Heaven hath blest our days, will leave the world better provided than they found it. And whereas in former times, such generous, free-spirited worthies were as the rare newly observed stars, a single one the wonder of an age, and this last century

can glory in numerous constellations; I doubt not but that posterity will find many things that now are but rumours verified into practical realities. It may be, some ages hence, a voyage to the southern unknown tracts, yea, possibly, to the moon, will not be more strange than one to America. To those that come after us, it may be as ordinary to buy a pair of wings to fly into the remotest regions, as now a pair of boots to ride a journey. And to confer, at the distance of the Indies, by sympathetic conveyances, may be as usual to future times as to us in a literary correspondence. The restoration of gray hairs to juvenility, and recalling the exhausted marrow, may, at length, be effected without a miracle; and the turning the now comparative desert world into a paradise, may not improbably be expected from late agriculture. Now those that judge by the narrowness of former principles and successes will smile at these paradoxical expectations. But questionless those first inventions which have, in these latter ages, altered the face of all things, were as ridiculous to former times in their naked proposals, and mere suppositions. To have talked of a new earth to have been discovered had been a romance to antiquity; and to sail without sight of stars or shores, by the guidance of a mineral, a story more absurd than the flight of Dædalus. That men should speak after their tongues were ashes, or communicate with each other in different hemispheres, before the invention of letters, could not but have been thought a fiction. Antiquity would not have believed the incredible force of our cannons, and would as coldly have entertained the wonders of

the telescope. In these we all condemn antique incredulity. And it is likely posterity will have as much cause to pity ours. But yet, notwithstanding this straightness of shallow observers, there are a set of enlarged souls, that are more judiciously credulous. And those, who are acquainted with the diligent and ingenious endeavours of so many true philosophers, will despair of nothing."

Yet the new philosophy, valuable—invaluable—as it was, could not unfold all the wonders of the universe. There were many subjects, such as the intimate nature of mind and of vitality, to the elucidation of which it was wholly inapplicable, or, if applicable, inadequate; and even with the light which a century and a half of experiments and observations have shed upon us, there are numerous points in physics on which we remain in deep obscurity.

Condorcet—the strenuous advocate of the perfectibility of the human race—wildly supposed, that the time may arrive, when death will be the effect only of extraordinary accidents, or of the destruction—which will gradually become more and more tardy—of the vital forces; and that, in effect, the duration of the middle period between birth and this destruction has, in itself, no assignable term. Such a consummation is not to be expected, and indeed passeth all our understanding. Others have supposed, that rapid as the progress of science has been, and with every probability of its continuing to advance with accelerated speed, the universal law of compensation will continue to balance the improvement of the human understanding, by some

equivalent failing. The subject is one of higher metaphysics. There are, doubtless, limits beyond which the powers of the human intellect cannot pass, but we are far from having attained those limits. Who, indeed, shall attempt to assign bounds to it? Instead of employing our time in such unprofitable discussions, it is better to turn assiduously to the discovery and investigation of truth, and whether our efforts be directed to *every* branch of the tree of knowledge, or to *one* only, science and humanity cannot fail to be enriched by precious fruit.

What a change has spread over our science since the period when it was associated with the arts of the astrologer; and since the surgeon was in humble co-partnership with the barber! Yet the disjunction was not accomplished at any distant period. In Great Britain, the barbers were separated from the surgeons in the eighteenth year of George II., and the latter were not erected in England into a Royal College of Surgeons until the commencement of the present century.

As a point of history, pregnant with valuable deductions, it is good to look back upon the condition of medicine in former times—and in times not very remote from our own—and to compare it with that of its sister sciences, with which, as we shall find, it has always, more or less, kept pace; and when we notice, in our professional ancestors, strange conceits, fantastic reasoning, and singular confusion in tracing the relation between cause and effect, it is well to reflect on the state of mental and physical science at the time; and if we investigate closely, we shall find, that the men, who



appear to us so defective in their powers of observation and reflection, were but examples of the general learning of the period.

Many of the superstitions of former times prevail, indeed, now as they did formerly, but with this difference—that, two or three hundred years ago, the facility for the reception of the marvellous, and the imperfect state of experimental science, occasioned their prevalence in the higher intellects; whilst, at the present day, they are mainly restricted to the vulgar. Those higher intellects were indeed sadly deficient in wisdom. Learned they were in all the scholastic knowledge of the period; but where mystery existed on any subject, instead of submitting it to the test of experiment and observation, they received it as an heirloom from their predecessors, and never dared to dispute the word of the master.

Roger Bacon—the Franciscan—who preceded his great namesake in bursting the bonds that had previously fettered the understanding, and dissolved many of the idle creations of credulity and superstition, amidst some admirable remarks on the productions of experimental science, observes that the sage pursuer of it profits by the intuitive wisdom of the crow, the serpent and the eagle, whose innate knowledge teaches them to find the means of retarding the termination of their own existence; and therefore, he argues, the wise have always closely watched the lower animals, for the purpose of stealing from them their knowledge of the powers of herbs and stones and metals.

Early in the seventeenth century, Sir Kenelm Dig-

by—unquestionably a philosopher for the period in which he flourished—compounded his sympathetic powder and armatory unguents, which were applied, not to the wound, but to the weapon that had inflicted it; and was most credulous as to the existence of strange and mysterious sympathies between the human body and all that had previously formed part of it; believing, that if a red-hot iron were run into a piece of excrement, the person would experience a sense of burning in the part whence it had proceeded.

About the same period, it was universally credited, by the learned and the unlearned, that grafts of flesh, united to another body, died when the person died from whom they had been taken; and we have a marvellous case, in Thouret's modern work on Animal Magnetism, of a man at Brussels, who had an artificial nose made by engrafting, which served every useful and ornamental purpose, until the person from whom it was taken died, when it suddenly became livid, and fell off. Tagliacozzi or Taliacotius, the great improver of nose-grafting—for it is an ancient Hindoo operation—and whose native city, Bologna, erected a statue, with a nose in its hand, in commemoration of his dexterity, lived in the very era of superstition, (nearly three hundred years ago,) when the simultaneous death of the parent and the graft was universally credited; although the slightest attention to Friar Bacon's rules for experimental research would have shown the fallacy of the belief. Accordingly, the folly has not escaped Butler in his *Hudibras*.

Sir Kenelm Digby, too, believed fully, that “at the

approach of the murderer, the slain body suddenly bleeds again;"—a superstition often referred to in our older poets, and which was so universally credited as to give rise to the trial by Bierright, so admirably depicted by Sir Walter Scott in his *St. Valentine's Day*.

Again, Bacon, the chancellor, with all his philosophy, was disposed to believe in the wondrous virtues of charms and amulets, and admitted the existence of the magical power of the will—a delusion which yet prevails: and, still later—less than two hundred years ago—the learned and the quaint Sir Thomas Browne was an embracer of the wonders of astrology and witchcraft. When asked by a Lord Chief Baron, equally superstitious, "whether the fits of an old woman were from disease or the devil," Sir Thomas replied, that "they were heightened by the devil co-operating with the malice of the witches."

Nay, it is not much more than one hundred years since the efficacy of the royal touch, in curing scrofula, or king's evil, was implicitly credited. The first English sovereign who touched for this affection, is said to have been Edward the Confessor, who lived in the middle of the eleventh century; and the last that encouraged it was Queen Anne, who died near the commencement of the eighteenth. One of the very last subjected to the degrading mummary was the distinguished Dr. Samuel Johnson, who, *by the advice of a celebrated London physician*, Sir John Floyer, was carried to London in 1712, where he was actually touched by Queen Anne, but without effect.

Much of the success that often followed this practice

has been ascribed to the influence of the mind over the body; but Wiseman, one of the fathers of surgery, who lived in the early part of the seventeenth century, and who had the best opportunities for observation, asserts, that a part of the duty of the royal physicians and serjeant surgeons was to select such patients, afflicted with the evil, as showed a tendency towards recovery, rejecting all others; and as full confidence was placed in the effect of the royal touch, the disease was fortunately left to itself, and not officiously interfered with.

It has been said, that these and similar delusions are inevitable—that the improvement of the world is destined to proceed in cycles, and that whenever a new light bursts upon the eye, it requires some time before the organ can discern clearly amidst the unaccustomed blaze. In this, there is truth; and, as the world proceeds, successive cycles and epicycles will doubtless exhibit the fruits of anterior experience. Ages of obscurity, bootless conjecture, and dreamy enthusiasm preceded those of sound sense and rational observation; but they were necessary antecedents, and intimately connected with the results.

It may not be so easy for us to trace the gradual improvement in any two successive eras, which melt into each other by indefinable gradations; but if we select distant periods—the age, for example, of either of the Bacons and our own—the evidences of mental advancement are signal. *Then*, the loftiest spirits quailed under superstitious terrors, and the most marvellous credences. *Now*, these delusions are confined chiefly, not wholly, to those whose minds have been neglected and poisoned

in their youth, and whose circumstances in life have not permitted them to receive that mental culture, which could alone prevent the reception of such impressions, or disenthral them if already received.

Who of the period of either of the Bacons, would have credited that we can draw down the forked lightning from the clouds, and rob the heavens of their artillery? or that the subtle vapour which, when breathed, destroys animal life, but is necessary for the nutrition of the vegetable—which mantles in the cup, and whose base crystallizes in the diamond—could, by the skill of the modern chemist, be converted into a solid, so as to be held in the hand, and transported from place to place?

But, whilst science is proceeding with rapid strides, the belief, that the body bleeds on the touch of the murderer, still exists amongst the most benighted of the people. Constantly, in the author's attendance on the inmates of an eleemosynary institution, he sees the protecting amulet placed near the heart; and the public prints of Great Britain, and occasionally of this country, advertise at a high price the caul,—that is, the dried membranes of the fœtus, when it is born with them unbroken,—which is supposed to bestow "good luck" on the possessor. Not long ago, the public prints informed us that the body of a blacksmith, a resident of Philadelphia, had been found in the Delaware, so mutilated, that it was only recognised by a coffin screw, fastened round the neck for a charm; and a case has recently come to the author's knowledge, in which the touch of the hand of a dead man was employed to dispel a tumour on a child's face.

How strongly do these irrational practices show the necessity for the diffusion of true knowledge! The wide extent of credulity and superstition affords, indeed, a humiliating subject for reflection, and signally exhibits

“What a reasonless machine  
Can superstition make the reas’ner man.”

The belief, that some human beings could attain the power of inflicting ills on their fellow creatures, and of controlling the operations of nature, is one of the highest antiquity. It has appeared in every region of the globe; and, from its extensive prevalence, it is evident that the human mind, especially in its state of ignorance and barbarism, is a soil well adapted for its reception and cultivation. Life—it has been well said—has so many evils, which the uninformed mind can neither prevent nor avert, and encourages so many hopes, which every age and condition are anxious to realize, that we can hardly be astonished to find a considerable portion of mankind become the willing prey of impostors, who practise on their credulity by threats of evil and promises of good, greater than the usual course of nature would dispense; nor have the lights of divine revelation, nor the circumstance of their being discountenanced by both civil and ecclesiastical laws, prevented such frauds and absurdities from being encouraged. Their foundation seems to lie deep in the heart’s anxiety about futurity, in its impatience for good greater than it enjoys, and in its restless curiosity to penetrate the unknown, and to meddle with the forbidden.



As regards the medical profession, this deep-rooted feeling is only to be eradicated—if eradicated it can be—by the dissemination of a greater degree of knowledge respecting the nature and powers of the science, amongst the community. It has always appeared to the author, that if the public were acquainted with the rigid system of induction—the careful observation and comparison of facts—required of those of the profession who keep pace with its advanced and advancing condition; if they knew how indispensable it is to be accurately acquainted, not only with the mode in which the functions are executed in health, but with the various derangements they suffer in disease; if they were aware of the nicety of discrimination which is demanded of the practitioner, and the necessity for knowledge derived both from his own observation and from the recorded experience of ages, they would pause before they had recourse to remedies of which they know nothing, and to pseudo-physicians, who, neither by education nor by habits, can possibly be equal to the important functions they assume.

The public are singularly ill-informed regarding the qualifications of the physician. His art, indeed, is presumed to be enveloped in mystery, which no effort of theirs can penetrate. It is this presumption that encourages the hardy empiric to bring forth his nostrums, satisfied, that in the mystery which he throws around them, numbers will have recourse to him; and that, when the delusion is exploded—which, sooner or later, it is sure to be—he, at least, will have reaped his harvest. Where, indeed, are now the vaunted remedies

of the Rocks and Brodums? Where the celebrated Balm of Gilead, which was the foundation of the large fortune and the splendid establishment of a Solomon, in name, not in wisdom? Almost forgotten—certainly scarcely ever used! Yet these quack remedies were, at one time, as extensively employed as any of those that have been more recently ministering to the credulity of mankind, and that are certainly sinking into the insignificance which they merit.

It is unfortunate, that the human mind is so constituted as to incline to place credence in any one, who asserts that he possesses unwonted powers in relieving human suffering, or who is bold enough to place his pretensions to notoriety unblushingly before the public. The unprofessional empiric issues his handbills, and chalks his name on walls, well aware that the mere repetition of his name and address will tend to procure him occupation. Every traveller, not a quarter of a century ago, must have had impressed on his memory, "Consult Dr. Eady, No. 45 Frith street, Soho,"—the *affiche* on the dead walls in every part of the British metropolis, and for a distance of at least forty-five miles in every direction. The professional empiric—does not have his name chalked upon walls, but he selects methods for attaining notoriety which are scarcely more praiseworthy. Self seems to be his only object, and self-aggrandizement the only reward he looks to. The public, heedless, or not aware of those nice shades, or even of the sharper outlines that distinguish the honourable and the enlightened practitioner from his unworthy bro-

ther, forget, if notoriety be acquired, and unmerited success attend in its train, the sinister schemes that led to it; and they are apt to regard the expressed sentiment of the better part of the profession to be founded in envy or jealousy. It is the same feeling that fosters the "new lights," which flicker for a time, like the fire-fly in its season, and pass away, perhaps to be restored in their pristine shape, but more probably after having undergone some unimportant metamorphosis.

The vacillation from sect to sect, which, at one time was more characteristic of our profession than it is at present, has perhaps encouraged all this, by impressing the public that we ourselves have no fixed principles to guide us, and that the unprofessional might accidentally light upon something, which might be more satisfactory for the removal of disease, than the members of the profession itself. They have seen physicians, at one period, believing that almost all diseases are to be treated by stimulants; at others, embracing the view that they require the most powerful antiphlogistics or sedatives; at others, again, referring them to some particular part of the economy—the lining membrane of the stomach, for example; and, after the lapse of a few short years, discarding this view, and becoming—what they ought always to have been—essentially eclectic. They have seen Humorism and Solidism, Brunonianism and Broussaism, supported in turn, and in turn abandoned, by the self-same persons; and they have felt,—what has often been expressed, and with some is considered almost proverbial,—that all medicine—regular medicine—must be uncertain, and

consequently not superior to the emanations of empiricism, seductive, as they are, by the array of successful cases, and of successful cases only, that are always brought forward in their support.

It has been properly remarked, that the tendency of the present age is to expansion—expansion in all things; and our science is exhibiting the like spirit. We look to the scientific of all countries for a supply of materials—the results of their observation and reflection. We compare those results with our own, and in that spirit which should characterize every citizen of the great republic of science,—for in science there is but *one* republic,—we freely furnish them with our own contributions, and we ourselves select from all that which is good. Our journals teem with the observations of our own practitioners, and with the recorded experience of our brethren in every part of the world; and in the space of a few days, after their publication on the other side of the Atlantic, we place in the hands of physicians, in every part of this extensive continent, republications of valuable monographs and general treatises, which shed light on our science, and draw down credit on their authors.

The spirit of exclusivism has been abandoned, and we adopt useful suggestions, no matter whence they proceed. The man who has never left his own county, or his own fire-side, may be possessed of all the kindlier sympathies; he may have all the knowledge which his feeble opportunities permit, but he can make no comparisons between it and others; his judgment must be narrowed down to the restricted circle around him, and

the small sphere of observation which he enjoys. When, however, he quits his homestead, and mixes with the busy world around him, he speedily finds that others are at least as happy and as informed as he; and, that new views and new feelings arise from his intercourse with his fellow men: things, which he at one time esteemed indispensable, are now no longer so regarded; and his mind becomes gradually liberalized and expanded.

Such, likewise, is the effect of communion with our brethren of the profession. In the routine system of practice, at one time more extensively pursued than it is now, the physician proceeded from day to day in the same beaten track, consoling himself should the results of his treatment be unfavourable, that the climate or locality required it, or that the disease was beyond the reach of human skill. In process of time, however, the recorded labours of his professional brethren reached him through the numerous channels of our periodical literature; and principles were gradually instilled into him, which produced expansion of his powers of observation and reflection, and he discovered that the restricted notions he at one time possessed were fallacious, and that to practise his profession *jucundè et tutissimè* a judicious eclectism was indispensable.

In alluding to the liberalizing influence of travelling, it may be proper to remark, that whilst it tends to remove the limited views, which have been engendered in a narrow sphere for observation, there is great danger that under the new impressions thereby induced, older, and perhaps more sober impressions may be swept away, and the charm of novelty may be so at-

tractive as to possess the mind altogether. Especially does this liability exist in youth, and it is one of the objections to the course pursued by many of our young gentlemen, who seek the shores of France and Great Britain, to *complete*, as it is considered, their medical education. All are not sufficiently fortified to resist the glare that meets their eyes, and the enthusiasm, not always tempered with discretion, which they occasionally witness. Unwonted facilities for observation are considered to bestow unwonted wisdom; and the lessons promulgated from the lips of teachers who are attached to large institutions, and who pronounce the winged words of fancied experience with the authority of the master, sink deep into the youthful heart, and cause him to resign his judgment, and subject himself implicitly to the *verba magistri*. He speedily finds, however, when he returns to his country, and is removed from the mirage with which he was surrounded, that much which was inculcated, and which he implicitly believed to rest on a sure foundation, has to be rejected when his mind is untrammelled; and that more crumbles under the light of true experience; until the superstructure, which he had erected on so fair and yet deceptive a foundation, totters even to its fall. And thus it happens, that we occasionally see views which had been embraced in enthusiastic France, and which had been urged to hearer after hearer by the teacher as worthy of all adoption, gradually impressed in a feebler and feebler tone, until they are wholly abandoned, and ultimately even publicly opposed.

Perhaps, however, the diminished obedience that is



now paid to the dictates of the master, and the recommendations to this course that daily emanate from our professional chairs and elsewhere, may have led us to pay too little respect to our eminent predecessors and contemporaries; and to engender the arrogant feeling, which is encouraged to a certain extent by our equal institutions, that each individual is as capable of profiting by observation and reflection as his neighbour. Nothing can be more erroneous: as in reasoning on other subjects, so is it with reasoning on medicine. Some men are endowed with more rapid conceptions, and with better powers of observation and reflection than others: such individuals will necessarily be distinguished above their brethren; but no sound practitioner will be presumptuous enough to rely altogether upon his own fallible judgment, without comparing it with the recorded results of the experience and judgment of others, as contained in the many excellent productions of the press that are always, or almost always, within his reach.

It has been before said, that an inattention to physiology is at the foundation of most of our medical errors, It might have been added, that mistaken notions in regard to it have given rise to many irrational theories, and to some strange delusions. It is good to look back to some of those, to compare the present with the past, in order that we may hereafter learn to avoid retarding influences, and endeavour to discover the pathway to truth.

Mysterious as are the functions executed by living beings, and especially by the most elevated of them—

man,—intricate and inscrutable as many of them have been, are, and must probably ever remain, it is not strange that attempts should have been made in all ages to penetrate the obscurity; and that singular and fantastic notions should have received, in the infancy of science, a degree of attention of which they were undeserving. Far more strange is it, that in the nineteenth century beliefs should be openly maintained, which are not less wild and visionary than many of the speculations of our forefathers of the times of Paracelsus, and of Jacob Böhmen. Indeed, many of these are but the revivals of prototypes, which had created a deep sensation, then passed into forgetfulness, and in the fulness of time had again worked their way to the surface to pass through another cycle of increment, maturity, and decay.

At different periods, physiology has had her votaries, who attempted to explain all the phenomena of the living organism by abstract calculations, and by the laws of mechanics, hydrostatics and hydraulics; and it cannot be denied, that many of the functions admit of valuable elucidation from the physical sciences. The bones are levers; the joints are fulcra; the muscles act as the power; and the action of the inanimate lever, fulcrum, and power can be calculated as accurately as in the case of the ordinary lever with which we raise weights; but no mathematical calculation can convey any idea to us of the degree of force which the *living* muscle is capable of exerting. A man, in a state of health, is able to raise a certain weight by the contraction of the biceps muscle of his arm; but let him be

struck with the contagion of malignant fever, and, immediately,—although the lever, the fulcrum, and the moving power inserted into the lever, hold the same mechanical relation as in health,—he is not now able to raise as many ounces as he previously could pounds. The nervous power is enfeebled by the depressing morbid influence, and that power admits of no calculation. In mania, where it is inordinately exalted, the delicate muscles of the female can execute feats far exceeding those of which the same muscles of the healthy male are capable. Yet there seemed to be an exactitude, which was all desirable and captivating, in the announcements of the iatro-mathematical or mechanical physician. They were arrayed, too, in all the imposing forms of the exact sciences, and thus idle statements were apt to be received as indisputable truths. For example, it was laid down, that a knowledge of the proper dose of a medicine could be obtained by taking the square of the patient's constitution; and although no rules were given to determine the constitution itself, the recommendation was adopted by author after author, so long as the system predominated. Yet science derived essential additions from the labours of several of the distinguished followers of this doctrine; and the names of Borelli, and Bernouilli, amongst others, will ever adorn the history of physiological science.

Not less imposing were the views of the iatro-chemical physicians, who likewise added greatly, notwithstanding many of their visionary speculations, to the progress of medicine. What, indeed, is the animal or

the vegetable organism but an extensive laboratory, in which composition and decomposition are perpetually going on;—effete parts being cast off, and new ones constantly deposited in their places? Was it strange, then, that the minds of physiologists should be turned to chemistry, to throw light upon these recondite processes; or that—in the childhood of chemistry—vague and often irrational views should have been entertained in regard to them. The blood was seen to move constantly and to bathe every tissue. It was properly looked upon as the pabulum whence every portion of the body was formed. It was supposed to be liable to changes, to which all solutions of organized matter are prone. Fancied acid and alkaline humours were presumed to meet in the heart, to excite effervescence there, which generated heat to an extent that might have been dangerous, had not nature—which always means Nature's God—placed the lungs in the vicinity to act like a pair of bellows, and temper it. Humours of various kinds—*peccant*, as they were termed—entered, it was conceived, the fluid of the circulation, and produced tumult and disorder; but, as in the case of ferments out of the body, to which they were likened, they went through a stage of concoction and maturation, and were finally expelled. Thus it was in fevers;—the heat was necessary to the concoction and maturation; and the crisis—whether by sweating or purging—eliminated the peccant or morbid matter, and the fever ceased. Even yet popular notions cling with pertinacity to supposititious humours in the economy; and the practice at Dotheboy's Hall, of administering

sulphur on stated occasions to purify the blood, is a source of infantile disgust and abhorrence to others besides the unfortunate inmates of a Yorkshire seminary. Similar impressions led to the practice of blood-letting at certain seasons of the year, and at stated periods of the moon; and it was considered to be a high qualification to

“Know when she was in fittest mood  
For cutting corns, or letting blood.”

Even yet, on St. Stephen's day, it is the custom, in many places, to bleed horses; and within the present century a valuable contributor to medico-legal science, especially to that which relates to insanity, was removed—and properly so—from his position as a medical officer of Bethlehem Hospital, London, because he continued the ancient custom of bleeding the insane on particular days. These are relics of old notions that had their origin partly in faulty chemistry. They have ceased now with the profession, but adhere with a bond, progressively growing feebler, to some of the unprofessional. A sounder chemistry now sheds its light on our science. To it we must, indeed, look for important aid in enabling us to decypher the scroll of life; and although we may never attain a knowledge of the vital principle itself, chemistry may assist more than any other branch of science in enabling us to comprehend its results. Without it no one can pretend to be a physiologist; but the student must be on his guard against being led away by the dogmatical statements of men of name, who may be honest in their endeavours to arrive at truth,

yet may not be sufficiently cautious in attaining their conclusions. Important contributions to chemical science, have recently emanated from the press. They have been heralded forth as lights to lighten us on many obscure phenomena of the living body; and they are unquestionably efforts in a most praiseworthy direction, and especially by one who has made valued contributions to chemical science, and particularly to organic chemistry. The physiological student should examine them carefully, and endeavour to separate that which is proved, from that which is plausible. Whatever chemical result is announced on the authority of such men as Liebig is worthy of all attention: whatever is offered by him as a speculation necessarily requires to be confirmed. He himself, indeed, states, that his work contains a collection of problems, such as chemistry at present requires *to be* solved; and a number of conclusions, drawn according to the rules of that science, from such observations as *have been* made."

It is to be feared, that the work of Liebig may lead the more enthusiastic of physicians to the adoption of physiological explanations, and therapeutical practices, which may not stand the test of examination. For a time, chemical physiology has been, doubtless, on the ascendant. This result has been favoured by the extensive diffusion of Liebig's work in a form that is within the means of all; and it will not be surprising if we should see chemical remedies prescribed to supply presumed defects in the elementary constitution of organs whose functions are deranged. The enthusiasm will soon, however, subside, and when the minds of observers



have settled down into a state of quiet, the solid enduring results will be duly registered, and form permanent additions to the science of life.

The same kind of revival has taken place in regard to the microscope. When the instrument was first discovered, it was believed to be a means of unravelling the intimate structure, and even the functions of parts that had been veiled in obscurity; and from it, doubtless, arose histology and histogeny, or the anatomy and physiology of the tissues, which are now cultivated almost as new branches of anatomy and physiology. But the startling statements that were made; the frequency with which the observations of one individual were contradicted by those of another; and with which "facts" were made to correspond with preconceived hypotheses, brought the instrument into disrepute. As an example of this may be instanced the discovery of the spermatie animalcules, which, for a time, changed the whole views in regard to generation. The animalcule was presumed to be the *mannekin*—the *homunculus*, which worked out its own developement, in the ovary first, and in the uterus afterwards; and a celebrated pupil of Leeuenhoek is said to have affirmed, that he not only saw these animalcules under the shape of the tadpole, as they were generally described, but that he could trace one of them bursting through the envelope that contained it, and exhibiting two arms, two legs, a human head, and a heart! Yet we still recur with satisfaction to many of the observations of Malpighi, Leeuenhoek, Hooke, Swammerdam, Grew, Lieberkühn, Hales, Della Torre, Hewson, Fontana, and others

of the earlier prosecutors of minute or microscopic anatomy.

At the present day, the zeal for microscopic observations is carried so far, that microscopic journals, and microscopic societies have been formed; and rich contributions have been made to histology by such men as Henle, Gerber, Wagner, Mandl, Klencke, Gulliver, Barry, Schwann, Schleiden, Wharton Jones, Miescher, Bowman, Valentin, Berres, Bischoff, Carpenter, and a host of other worthies. But notwithstanding the advantages that must accrue to science from accurate observations made in this or any other manner, evils may arise from the exclusive spirit in which they are apt to be conducted. In an introductory lecture delivered by the author some years ago, and which was published by the members of the class, he used the following language:—

“Yet, gentlemen, although we are amazingly improved in our habits of noting and registering facts, I am not sure if the more modern methods of observing are not calculated, with all their advantages, to be productive of some evil. The school of Louis, to which we owe many excellent monographs on individual diseases, urgently impressing, as it does, upon the tyro, the necessity for the most careful observation of the phenomena presented by disease, is apt to leave the impression, that this is all the practitioner needs, and to convey the too exclusive idea, that self-observation is alone necessary to make the accomplished pathologist and physician;—an ideal rock, on which the pro-

fession has struck for ages, and which has greatly retarded the onward course of medical science.

“‘All must accord with the disciples of that painstaking school, that strict and accurate observation is needed to diagnosticate the precise pathological condition; but all must equally admit, that this diagnosis is only preliminary to the great object of our investigation,—Therapeutics or the mode of treating disease. On this object the concentrated knowledge of anatomy, physiology, pathology, materia medica, and chemistry, must be directed. *Observation* furnishes but the materials for *thought*, and sound Therapeutics requires both. To treat disease understandingly is the end and aim of the profession, which you have embraced, and observation—accumulated observation—forms an essential element, but still an element only.’”

The same may be said in regard to the utility of observations made with the microscope as a branch of physiological inquiry. “We believe,” says a recent writer (*Brit. and For. Med. Rev.* for Oct. 1842, p. 492) “that if the understanding be exercised with an energy proportioned to the industry with which facts are pursued, the present will be a more brilliant period in the history of physiology than ever yet was known; for never were so many engaged in the pursuit, and never was there so much labour bestowed upon it; and already, by the few who combine clearness of thinking with accuracy of observation, some most striking and important results have been attained. Only when we see an apparatus exalted so much above its due state of subserviency, we cannot help fearing lest much of that which is being

done should be done in vain; and lest that which is gathered in disorder, and often with a heedless curiosity, should end, as it did once before, in mere obscurity."

The phenomena of the nervous system, and the most elevated of those, the mental and moral manifestations, are admitted to be the most complex, and the least known of all. We are not to be astonished, therefore, if the most heteroclite doctrines should have been entertained in regard to them. Of late, some of those views that had long figured on the stage, and sunk, apparently to rise no more, have experienced a resurrection; and although, in the interval, physical science had been proceeding with rapid strides, and the school-master had been extensively abroad among us, they have, in their reproduction, assumed all their original and monstrous deformities.

It was an ancient belief, that certain persons are capable of exerting a mysterious sympathy over others, so as to affect, in the most baneful manner, all their undertakings; holding them, as it were, in a kind of spell and thralldom, and surrounding them with the influences of witchery and magic. Nor has this delusion wholly passed away from us. Amongst the lowest classes, it is still believed, that an individual may be *overlooked* or *tricked*, as it is called; and the corroding impression has existed in such force, that more than one instance has occurred, in which the person, like the Duke D'Olivarez, in *Gil Blas*, has sunk to death, the victim to his own distempered imagination.

There was no end to the varieties which this sympathy assumed. If a person were suddenly taken with

a shivering, it was a sign that some one had, just then, walked over the site of his future grave; but probably—as Grose has dryly observed—all persons are not subject to this sensation, otherwise the inhabitants of those places whose burial grounds are in exposed situations, would live in a perpetual paroxysm of shaking! When a person's ear or cheek burned, it was a sign that some one was then talking of him; if it was the right cheek or ear, the discourse was to his advantage; if the left, to the contrary. Indeed, all these and other irrational views are in existence, but, as before remarked, they do not now possess the higher intellects, as they did formerly. Grafts of flesh, obtained from another's body, were presumed to hold a mysterious community with their former possessor; and we are gravely told, that in a case where a plastic operation had been performed on a man's arm, and in which the graft was obtained from another's body, it was but necessary for the person to trace letters on the graft, and the original owner of the piece of flesh could be corresponded with, no matter how great the distance of the parties from each other. Nay, it was farther believed, that when the first owner died, the graft immediately fell off. Such a case has, indeed, been related as a *fact* in modern times; and, as a confirmation of the truth of the general rule of sympathetic association, it was stated, some years ago, that grafted fruit trees in the Island of St. Helena died on the very day on which the original trees, whence the grafts had been obtained, died in England. Were these, indeed, facts, they would deserve to be considered much stranger than fiction.

Many of these conceits probably originated—directly or indirectly—in the discovery of the powers of the mineral magnet. When the first dawn of magnetism broke upon the minds of men with whom physical science was in its infancy, it is not surprising that the physician should believe it a most potent agent, and that he should adopt it for the cure of many diseases. Accordingly, Crollius—one of the great advocates of the *doctrine of signatures*, to be mentioned hereafter, details the case of a peasant, who, having swallowed a knife, had it drawn through the parietes of the abdomen by a magnetic plaster. Some of the older surgeons—of Ambrose Paré's time—in cases of hernia, made the patient swallow a magnet, and placed iron filings on the hernial protrusion to draw it inwards; and Paracelsus and Van Helmont recommended a magnetic plaster to the abdomen, when abortion was threatened, to draw the foetus upwards. Nor was it astonishing, that enthusiasts, like Paracelsus, should attribute occult and miraculous powers to the magnet of a *moral* kind; and that it should be believed, that every person who carried one about him should attract the love and esteem of his fellow citizens. Paracelsus the empiric, who—like Robespierre the tyrant, has found apologists and even admirers in modern times—thought, that by its proper use it might arrest disease, and prolong life; and, since his time, it has been greatly connected with numerous delusions. In those dark days, it was generally credited, that all wounds inflicted by metallic bodies could be cured by the magnet; and, gradually, credulity extended so far, that it was deemed sufficient to mag-



netize the weapon that had inflicted them; hence arose the *weapon salves*, the *armatory unguents* or *hoplochrysmata*, as they were learnedly termed, whose entire efficacy, it was considered, about the middle of the seventeenth century, the height of hardihood to doubt. Their virtues were lauded in the works of the day; and are referred to by a modern poet.

“But the broken lance in his bosom stood,  
And it was earthly steel and wood.  
She drew the splinter from the wound,  
And with a charm she stanch’d the blood;  
She bade the gash be cleansed and bound:  
No longer by his couch she stood.  
But she has ta’en the broken lance,  
And wash’d it from the clotted gore,  
And salved the splinter o’er and o’er:  
William of Deloraine in trance,  
Whene’er she turned it round and round,  
Twisted as if she gall’d his wound;  
Then to her maidens she did say,  
That he should be whole man and sound.”

To give a specimen of one of these ointments, the following recipe of the times of Paracelsus may be cited, premising, that it was considered to be adapted for the cure of any wounds inflicted by a sharp weapon, *except* such as had penetrated the heart, the brain, or the arteries. “Take of moss, growing on the head of a thief who has been hanged and left in the air; of real mummy; of human blood, still warm,—of each one ounce; of human suet, two ounces; of linseed oil, tur-

pentine, and Armenian bole, of each two drachms; mix all well in a mortar, and keep the salve in an oblong narrow urn." With this salve the weapon was anointed, and the wound was tied up, and left undisturbed. It is believed, indeed, that the practice then adopted with the wound gave the surgeon the earliest idea of healing by the first intention.

About the same time appeared the sympathetic powder of Sir Kenelm Digby, in the virtues of which the bigoted James I. of England was a firm believer, and himself practised with it in several cases; but it was not esteemed to be always necessary to apply either the weapon salve, or the sympathetic powder, to effect a cure of the wound. It was sufficient to magnetize the sword with the hand, to assuage any pain, that the weapon had occasioned: and "that which is beyond all admiration," says Reginald Scott, in his *Discovery of Witchcraft*, "they can remedie any stranger with that verie sword wherewith they are wounded; yea, and that which is beyond all admiration, if they stroke the sword upward with their fingers, the partie shall feel no pain; whereas, if they draw their fingers downwards, thereupon the partie wounded shall feelee intolerable pain."—And this is supposed to have been the first shadowing forth of animal magnetism.

But the power of sympathy was conceived to extend farther than all this. The magical influence of the will of one man over another was credited, as we have seen, by such men as Bacon, who lived in the very era of luxuriant superstition; and the belief has been resuscitated in our own day, to meet, it is to be hoped, with

its eternal *quietus*. It has been believed, for example, that when a person is in a magnetic or mesmeric state, it is but necessary for the magnetizer to *will*, that the magnetized person shall execute some act, and it is immediately accomplished; yet the Author has seen a self-styled adept *will* right earnestly, until he sweated at every pore with the exertion; but it was calling spirits from the "vasty deep," that would not come when he did call for them! The South, and the North, and the East, and the West, have been troubled on this and kindred matters; and been agitated by exhibitions of mysterious sympathies, in the reality of which grave and reverend signors have implicitly believed. It has been credited, for example, that a magnetized individual could be taken at the will of one with whom he is placed in communion or *en rapport*—the technical term—to a distance, and describe scenes and objects, which he had never witnessed, exactly as these scenes and objects really are; taste, smell, feel, and see objects, that are tasted, smelt, felt, and seen by another; and, in short, that an unbounded sympathy may exist between them, which is as real, as it is inscrutable. To the credit of the medical profession generally they have opposed this delusion, and, in certain places, by a train of experiments that ought to satisfy any unprejudiced person, have shown that there was no *clairvoyance*; no sympathy; and that the whole fabric of infatuation was based upon a few accidental coincidences. Whilst the delusion was in one place at its height, and the welkin rang with it, it had passed away, or was in the crescent, or wane elsewhere.

It is devoutly to be wished that all the members of the profession had exhibited due caution and deliberation in investigating these singular phenomena. One veteran teacher of the West, in a work entitled, "*Facts on Mesmerism, and Thoughts on its Causes and Uses*," has thus expressed himself in alluding "to the contest" in progress, respecting the truth and usefulness of mesmerism. "I declare," he remarks, "that contest to be as susceptible of an immediate, easy, and certain decision, as would be a dispute about the product of the union of sulphuric acid with soda, zinc, or any other substance. Of either question, the solution must be drawn from the result of experiments, alike simple, and easily performed. And in each case *ten* experiments *correctly* performed, and *identical* in their issue, are as conclusive as *ten thousand*. I have myself done, in a single hour, what ought to convince, and, did he witness it, *would* convince any unprejudiced, candid, and intelligent man, of the *entire* truth of mesmerism," &c.

"Never has there been before a discovery, so easily and clearly demonstrable as mesmerism is, so unreasonably and stubbornly doubted, and so contumaciously discredited and opposed,—opposed, I mean, *in words*; for the opposition is but a mass of verbiage; while the defence is a body of substantial facts. Yet never before has there been made, in anthropology, a discovery at once so interesting and sublime; so calculated to exhibit the power and dominion of the human will; its boundless sway over space and spirit." "For one person completely to identify another with himself—sense with sense—sentiment with sentiment—thought

with thought—movement with movement—will with will—and I was near saying existence with existence—and to gain over him so entire a control as to be able to transport him, in his whole mind and being, over mountains, seas, and oceans, into distant lands, and disclose to him there the objects and scenes which actually exist, of which he was utterly ignorant before, and becomes alike ignorant again, when restored to his usual condition of existence; and, higher and grander still, to waft him at pleasure through space to any or all of the heavenly bodies, of which we have any knowledge, and converse with him about them; such deeds as these may well be called amazing, yet are they as easy, certain, and speedy of performance, as many of the most common transactions of life.”—p. xxii.

Yet, by no “verbiage,” but by a “body of substantial facts;” by a series of well devised and carefully conducted experiments, guided by a discriminating mind, anxious only for the discovery of truth, one of the author’s colleagues, Professor J. K. Mitchell, has exhibited the fallacy of the “facts” and doctrine of clairvoyance, and of the fertile creations of the veteran enthusiast. He has shown to the satisfaction of “any unprejudiced, candid, and intelligent man,” that there is, in such cases, no identification of sense with sense, of sentiment with sentiment, of thought with thought, of movement with movement, and of will with will. The whole is a delusion, accidental or designed. Still, there is much well worthy of the study of the physician in the phenomena exhibited by one who is thrown into

the singular hysteroid condition, that constitutes what is termed the *magnetic* or *mesmeric* state.

One of the most startling of recent announcements is the statement, that if one of the compartments of the skull, as mapped out by the phrenologist, be touched whilst a person is in this state, he will immediately have his thoughts turned in the direction of the mental faculty that corresponds with the particular phrenological organ, and exhibit manifestations thereof in his actions and speech. Some of the phenomena witnessed by the author were certainly most strange; and, at first aspect, were strongly confirmatory of the union between phrenology and magnetism, and, therefore, of the truth of both. The results obtained by the same able investigator, ought, however, to put this matter likewise at rest. It has been demonstrated, that where the person operated upon has had no previous acquaintance of any kind with phrenology, not the slightest manifestation can be elicited; and that by stating aloud, that the manipulator is about to touch a certain organ, although in reality he touches another, the thoughts and actions may be immediately made to correspond with the organ mentioned—not with the one over which the finger is placed. The two following deductions of Professor Mitchell may be cited from the “Quarterly Summary of the Transactions of the College of Physicians of Philadelphia, for August, September, and October, 1842.”

“As we cannot believe in mesmeric ‘rapport,’ so we are not able to credit the existence of any peculiar sympathy between the operator and subject. Untrained or ignorant patients never show sympathetic phenome-



na. I have been pinched, and hurt otherwise, a great many times, without observing any suffering on the part of my subjects, until they were taught to believe that such a relation existed; and then they very honestly felt hurt, as people do in dreams—a kind of imaginary suffering.

“The phrenological phenomena of mesmerism, when rigidly examined, are found to consist, as do most of the mesmeric wonders, of ‘such stuff as dreams are made of.’ The *excitement* of the brain is *general*, the *direction* of that excitement is *given* by the *mesmerised person’s knowledge of phrenology*; but the patient is not in any case aware of his mental co-operation. This singular delusion or misapprehension runs through nearly the entire subject of mesmerism; most of the phenomena of which are a strange mixture of physical impulse and mental hallucination. Phrenologists alone feel the phreno-mesmeric excitement. Persons partially acquainted with phrenology experience it only as to the organs known to them; while those who are totally ignorant of the subject present no local manifestations, until they are taught, either awake or asleep, what they should know, and what they should do. The displacement of old organs in one city, their retention of location in another, and the adherence of the patients to the peculiar and dissimilar systems of phrenology, which they have, respectively, been taught, show clearly, that the direction of the cerebral excitement is personal and arbitrary; while the new maps of the cranium, so widely different from each other, leave us no longer in the least doubt as to the delusive

source of the compound science of phreno-mesmerism."

Phrenology is a branch of physiology. It affords an exemplification of the fact, that we are anxious to seize hold of every thing that seems to be demonstrative in regard to the intimate investigation of the functions of the human brain. Psychology is mental philosophy, and whatever knowledge we attain by its means must be by a laborious process of reasoning, of which all are by no means capable. It was, therefore, exhibiting an easy road to the mental organization of man, when it was pronounced, that his brain consists of a series of organs, each of which has for its function a particular intellectual or moral act. A few coincidences—as in the case of mesmerism—were quite sufficient to satisfy those, who are readily convinced of its truth. Moreover, it had antiquity in its favour. In its rudimentary state, it was supported by Aristotle. It was resuscitated in the middle ages, was shadowed out by Swedenborg, and assumed a new and more imposing form under Gall and his disciples. It afforded a geographical chart of the head, on which the inquirer into his own mental tendencies had but to look, and to compare it with that of others, in order to arrive at—he conceived—satisfactory information. It exhibited somewhat of the character of an exact science applied to a study universally considered to be unfixed, mazy, and difficult.

Yet, successive years have not tended to confirm the doctrine. The minds of some of the best physiologists are more chary in embracing it. Müller thinks Ma-

gendie right in placing cranioscopy in the same category with astrology and alchemy: Leuret and Carpenter affirm, that comparative anatomy and psychology are very far from supporting it, when their evidence is fairly weighed. Flourens, the perpetual secretary to the French Academy of Sciences, has opposed it vigorously in the *Journal des Savans*, on anatomical, physiological, and psychological considerations; and the author must admit—as he has already publicly admitted—that year after year's observation and reflection render him less and less disposed to consider even the fundamental points of the doctrine to be founded on a just appreciation of the encephalic functions.

But even were we to concede, that the fundamental principles are accurate, we might hesitate in adopting the details; and, still more, in giving any weight to it as a practical science. Gall, Spurzheim, and Combe would rarely venture to pronounce on the psychological aptitudes of individuals from an examination of their skulls. The first of these—and the founder of the doctrine, in its present shape—when he attempted to form a judgment, was not satisfied with examining the head alone. “In society,” says he, “I make use of many expedients to become acquainted with the talents and the inclinations of persons. I engage them in conversation on various subjects:”—and he adds, “to judge of the character of a person, make him talk of his childhood, and his early youth; make him relate his freaks at school; his conduct towards his relations, brothers, sisters, companions, the emulation which he felt;” and by these and other modes of examination,

which he describes, "the whole man," he says, "becomes developed before me."

Yet cranioscopy ministers so much to the self-satisfaction of children of larger growth, when the oracle, after an examination of their "developments"—the technical term—announces that they possess faculties, which they, perhaps, dreamt not of, and the fancied possession of which elevates them in their own conceit;—and, like astrology, and the more humble fortune-telling, it affords so much gratification to parents, in foretelling prospects of distinction for their children, when announced by a dexterous and wily operator, that father and child run together to learn their destinies; pay the fee, and receive a chart, to be but a sorry guide to them, however, on the voyage of life. This indiscriminate divination from the mensuration of heads, has been a sad detriment to phrenology, as a branch of physiological science. Its prevalence has, indeed, been grievously deplored by all enlightened phrenologists. "Highly as we estimate the discovery of Gall,"—says, very recently, one of the ablest of phrenologists—"immense as we regard the advantages which may be ultimately derived from phrenology, we confess, that we wish to see it *less* regarded, studied, and pursued as a separate science, and *more* as a branch of general physiology; and he adds, "In reviewing the circumstances, which have tended to lower phrenology in the estimation of scientific men, and, consequently, to retard both its progress as a science, and the general recognition of its leading truths, we should but very imperfectly perform our task, if we did not refer, in the strongest possible

terms of reproof and condemnation, to the too prevalent proceeding of examining living heads in minute detail and indiscriminately, and supplying the owners with an account of the 'development,' often on the receipt of a fee, varying in amount, as there is furnished or omitted a general deduction as to the character and probable conduct of the individual, with or without the 'philosophy,' according to the phraseology of practitioners of this art. We unhesitatingly maintain, that the science is not sufficiently advanced to supply evidence of its truth from every head, or from any one head, and consequently, that such practice, as a general one, is so much pure charlatanism. Where any strongly marked peculiarity of individual character exists, its outward sign, in appropriate subjects, will certainly be detected; but, from the very nature of the thing, these cases must constitute, not the rule, but the exception. The practice we condemn, however, makes no distinction of instances. Injudicious zeal, the common ally of ignorance, a wish for effect, not unfrequently more sordid motives, stimulate the self-styled phrenologist in this empirical career; and, as a matter of course, the errors and mistakes perpetually made are constantly appealed to as indicative of the sandy foundations of the entire phrenological edifice. We write advisedly in this our unqualified reprobation of the popular custom of 'taking developments.' We believe it to be an extension of the practical application of phrenology much beyond its legitimate bounds; and we appeal to any one having acquaintance with its results, whether any thing like uniformity—the true test of accuracy—

is obtained in the majority of cases, even when the most experienced and dexterous pronounce their judgment, if their explorations be conducted separately. We ourselves have even witnessed the greatest possible discrepancies. Nay, we have seen the *same* phrenologist furnish one character from the head, and a totally different one from the cast, whilst in ignorance of the original of this latter. This we have known to happen, not merely in the practice of one of your shilling-a-head itinerants, but in that of one not unknown to fame in the annals of the science."

Such are the views of a distinguished writer, who, unlike the author, expects much from phrenology, and has done much to give it countenance. Yet men will still form their judgments in this manner; and a solitary coincidence, as in all similar cases, will outweigh a dozen failures. How constantly are we not deceived as to individuals, even when we combine a judgment not alone of their cranial, but of their facial conformation; or, in other words, associate phrenology, or craniology, with physiognomy! When the poet and profound psychologist, Coleridge, was at one of the English watering-places, he found himself seated at the dinner table opposite to a man of most prepossessing appearance; with a countenance that would have been a study for Lavater, and a head for Gall and Spurzheim. The stranger maintained a profound silence during the repast, and Coleridge had ample time to indulge in various imaginings as to his probable position and character;—that he was a man of high intellect and great polish could scarcely be doubted; but all this beautiful ima-



gery was dispelled as the waiter brought in some apple-dumplings; when the "great unknown" clasped his hands and exclaimed, his countenance beaming with sensual gratification, "Them's the jockeys for me;"—and thus ended the delusion.

Were the phantasies to which reference has been made confined to simple speculation, the evils resulting from them would be endurable. Mankind must be entertained. It would appear, indeed, as if they must be deceived; and hence it becomes necessary, ever and anon, that a new tub should be thrown out to amuse the whale. Unfortunately, however, in the superstition and credulity that even yet exist in this enlightened age, it is believed, that a man may be born a physician, and that ignorant or designing individuals,—in or out of the ranks of the profession,—may possess a gift, which enables them to dispense with study, to discard all knowledge of the human body, to see intuitively into the very nature of disease, and to suggest a proper remedy.

In the year 1840, thirty-six thousand persons petitioned the legislature of New York for a change of the law towards certain practitioners in medicine, known as Thomsonians,—grossly ignorant men, one of whose leading principles is, that the human body is composed of four *elements*, which elements are, earth, air, fire and water; and one of their apothegms,—to cite the words of Thomson, the son,—“that the metals and minerals are in the earth, and being extracted from the depths of the earth have a tendency to carry all down into the

earth; or, in other words, the grave, who use them. That the tendency of all vegetables is to spring up from the earth. Their tendency is upwards; their tendency is to invigorate and fructify, and uphold mankind from the grave." Well might the framer of the minority-report, an intelligent lawyer, be led to remark,—in language too sarcastic, perhaps, "This is a world of humbugs; and with all our keen-sightedness, adroitness, skill and ingenuity, in all we undertake, we are, perhaps, the most easily humbugged nation in the world; and in nothing is this alacrity to be deceived more fully manifested, than in the eternal, never-ending, still-beginning, doctoring-still, and still-destroying patent medicines. Perhaps one-fourth of the advertising patronage of a country newspaper consists in puffing patent medicines, and this great tariff is levied on credulity afflicted with disease. If there were truth in the advertisements of a single paper, attested by the learned, the wise, and the pious, there is not a disease, to which poor humanity is heir, but what is susceptible of speedy relief and ultimate cure."

The Thomsonian or Botanic Physician has found in Philadelphia his proper level; but we are told,—by an interested witness, it is true,—that three millions of people in the United States were prepared to swear in the words of Thomson, the master.

If, however, Thomsonianism has waned in this parallel, its place has been taken by another off-set from the tree of credulity; whose absurdities are only greater because they are less! Ages ago, the credulous prac-

tioners of the period had the most fantastic notions in regard to the adaptation of particular remedies for particular maladies; and they maintained, that where such special adaptation existed, it would be shown by some indication or *signature* as it was termed; and hence arose the "*Doctrine of Signatures*" in Medicine. Saffron and turmeric were of a yellow colour: therefore, they were good in jaundice; *euphrasia* or eyebright had the appearance of the pupil of the eye, on its flower, and was, therefore, adapted for diseases of the eye; *hepatica* resembled the liver, and was calculated to cure diseases of that viscus. The walnut bore some similitude, at its periphery, to the convolutions of the brain, and was consequently a good cephalic. Endless, indeed, are the examples, that might be adduced to show the application of this doctrine—*similia similibus curantur*; but in our times the application of the remark has been changed; and the people are now ready to believe—and many of them do believe—that there are remedies, which are capable of inducing a morbid action similar in kind to one that may be going on in the organism; and that these two similar bodies—as in electricity—have a repugnance for each other. An additional branch of this doctrine seems to be, that a part is greater than the whole; and that medicines—to be effective—should be administered in excessively minute quantities; the decillionth of a grain of charcoal being an authorized dose!

The Author has not gone into any calculation on this subject, for he considers it unworthy of the trouble, or, indeed, of serious examination; but a recent writer has,

who expresses himself as follows:—"The leading homœopathists of this city (New York) speak of the decided effects of the *decillionth* dilution; and the lowest homœopathic dilution, to be obtained here, of medicines prepared in Germany, is the *third*, which is very nearly in the proportion of one drop of the tincture to one barrel of alcohol, or one grain of the extract to 4 cwt. of sugar:" the eighth dilution gives one drop of the tincture to one hundred millions of barrels; "so that by the time we reach the 30th, it would form a mass of alcohol larger than the whole solar system! A drop of the tincture, diffused through the waters of the Atlantic, would form a stronger solution than the 8th; and the same throughout all the waters of the globe, would be more concentrated than the 9th. If we take sugar instead of alcohol, the 3d degree of 'potence' would require more pounds than a man could carry, and the 4th degree would freight a north river sloop; the 5th, a 74 gun ship; and the 6th, our whole navy."

This calculation may be disputable, and disputed, but if we subject it to a large deduction, it will remain sufficiently startling; and cause us not to be astonished at the assertion of Jahr, a homœopathic writer, that the *decillionth* of a grain of flint, or charcoal, or cuttlefish juice is of equal efficacy with the same dose of arsenic or strychnia!

When the dramatist wrote the homœopathic sentiment—

"My grief is great because it is so small;"

the reply of the wag, in the pit, was equally homœopathic—

“Then ’twould be greater, were it none at all.”

Yet, to set all our philosophy still farther at defiance, we are told by the founder of the doctrine—Hahnemann—that homœopathic medicines acquire, at each division or dilution, a new degree of power, by the rubbing or shaking to which they are subjected; and this discovery Hahnemann claims to be his own. “It is a means”—to quote his own words—“of developing the inherent virtues of homœopathic medicines, that was unknown till my time: and which is so energetic, that latterly I have been forced, *by experience*, to reduce the number of shakes to *two*, of which I formerly prescribed *ten* to each dilution!” It is awful to reflect upon the possible consequences to a patient, who might have a ten millionth part of a grain of flint or charcoal sent to his country residence, and shaken even more than ten or one hundred times in its passage over our rough roads. The catastrophe could scarcely fail to equal that, celebrated by Coleman in his “Newcastle Apothecary,” where, by mistake, the direction—“*when taken to be well shaken*,” was interpreted to apply to the patient instead of to the medicine!

One more delusion only it may be well to specify on account of the lesson it affords. It is but recently defunct, and its ashes we shall not much disturb. This is the use of brandy and salt.

Fully impressed with the conviction, that this compound, if it did not render the patient immortal, ought

to make the discoverer so, charitable, but weak and credulous persons were energetically employed, here and elsewhere, in distributing pamphlets setting forth its miraculous healing powers:—for the zeal exhibited in such cases is wonderful, such as is never exerted, except where there is something equivocal and mysterious: yet, had these philanthropists been aware of the history of the compound, and of the springs that moved the original proposer, they would, perhaps, have paused in their zealous endeavours. As a part of its history, the following remarks of the editor of the London Medico-Chirurgical Review,—on a pamphlet entitled, “Brandy and Salt—a Remedy for various Diseases. By J. A. Vallance. Price 6d,”—may be cited. “Morrison’s pills,” he says, “that lion or leviathan of allopathy—the lung stretcher of Ely place,” [a notorious consumption curer, but a regularly educated physician, we regret to say]—“mustard seed—animal magnetism—nay, homœopathy itself may now hide their diminished heads. ‘BRANDY and SALT’ cure all diseases, and the remedy is within the reach of every individual from a duke to a dustman. There never was a more ingenious invention, a more felicitous combination, than ‘brandy and salt.’ The brandy makes the heart glad, and the salt increases the thirst for more brandy! Lucky invention—especially for the great promulgator, who has an extensive brandy manufactory in France! None but the veritable *eau-de-vie* will have any virtue in combination with salt.” And this compound was *infallible*, we presume, in forty diseases—in gout, consumption, inflammation of the lungs, asthma,



scrofula, palpitation, inflammation of the brain, cholera, insanity, cancer, "fevers of all kinds," paralysis, tic douloureux, spinal complaints, inflammation of the bowels, mortification, and twenty other grievous maladies:—a large list of cases cured, of the various diseases enumerated in the pamphlet, being published at the end. Mercenary motives, as in every similar case, formed the foundation of this base quackery; but they cannot always be so glaringly exposed; yet there is probably not a medical friend of the author, who did not find, two years ago, this brandy and salt officiously urged on his patient suffering under different protracted maladies.

Yet, the more sad and solemn part remains. We find the possessors of these views, which seem to us so irrational, patronized not only by the long-suffering, capricious, and confiding female, but by men, who, in the pursuit of their own honest daily avocations, exhibit no lack of good sense; and by others, who, from their opportunities and position, ought to be expected to reject unhesitatingly such marvellous insignificancies; and who, on other subjects, exert a judicious skepticism, and a just appreciation of ordinary events.

It is entirely consistent with the manifestations of the human mind, that excessive credulity and excessive skepticism should exist at the same time in the same person; and that one who is a declared infidel on many topics that are admitted by the wisest and the best, may yet cherish the marvellous and the monstrous. The ancient but apposite anecdote of the flying-fish is, doubtless, known to many; but it will bear repetition,

and has been presented again, of late, by a popular writer, C. Mackay, on a congenerous subject. "Well, son John," said the old woman, "and what wonderful things did you meet with all the time you were at sea?" "Oh! mother," replied John, "I saw many strange things." "Tell us all about them," replied his mother, "for I long to hear your adventures." "Well, then," said John,—"as we were sailing over the line, what do you think we saw?" "I can't imagine," replied his mother. "Well, we saw a fish rise out of the sea, and fly over our ship!" "O, John, John! what a liar you are!" said his mother, shaking her head, and smiling incredulously. "True as death!" said John; "and we saw still more wonderful things than that." "Let us hear them," said his mother, shaking her head again; "and tell the truth, John, if you can." "Believe it or believe it not, as you please," replied her son; "but as we were sailing up the Red Sea, our Captain thought he should like some fish for dinner, so he told us to throw our nets and catch some." "Well?" inquired his mother, seeing that he paused in his story. "Well," rejoined her son, "we did throw them, and, at the very first haul, we brought up a chariot-wheel, made all of gold, and inlaid with diamonds!" "Lord bless us!" said his mother; "and what did the Captain say?" "Why he said it was one of the wheels of Pharaoh's chariot, that had lain in the Red Sea ever since that wicked king was drowned, with all his host, whilst pursuing the Israelites." "Well, well!" said his mother, lifting up her hands in admiration, "now that's very possible, and I think the captain was a very sensible man. Tell me

such stories as that, and I'll believe you; but never talk to me of such things as flying-fish! No, no, John! such stories won't go down with me, I can assure you!"

How often do we meet with the counterparts of the sailor's mother, in our journeyings through life. The writer referred to affirms, indeed, that the great majority of mankind, and even of the wisest among us, are still in her condition—"believing and disbelieving on the same grounds that she did—protesting against the flying-fish, but cherishing the golden wheels;" straining at the gnat, and yet ready to swallow the camel. The zealous sectarian may be intolerant in regard to the beliefs or disbeliefs of his fellow Christian; and yet, skeptic as he is on those points, he may embrace without hesitation, and urge upon others, all the dogmas of homœopathy and animal magnetism, with the absurd extensions that have been given to them by the wildest of enthusiasts. "How,"—says one of these whose faith and credulity exceed his judgment,—“how can I shut my eyes to facts? I have *seen—observed*—with my own eyes, and I *must* believe.” Yet he sees the wonderful performances of the juggler,—performances which are far more astonishing than any to which we have referred, *sees—observes* equally with his own eyes, and *does not* believe; and only because he was prepared to witness a deception.

Every age has its follies. The Author has endeavoured to depict some of those that belong to the past, and to our own; and whose decadeney we shall witness in no short time, to give place, alas! to others. In the

case of homœopathy the revolution has already begun. Hydropathy is supplanting it in Germany, the place of its nativity. In the homœopathic hospital at Leipzig, the head quarters of the doctrine, a recent medical traveller found only eight beds; and of these, all but two or three were unoccupied; whilst the village of Gräfenberg was absolutely crowded with those who were undergoing the *Wassercur*, or “water treatment” of Priessnitz, “an unlettered and uneducated hind” of the Silesian mountains, who has induced some seven or eight thousand invalids, in the course of the last ten years, to submit themselves for weeks and months to his treatment. Regarding this, there is a growing enthusiasm; and a recent writer—a patient—in his zeal, informs us, that sleeping in wet sheets is by no means the disagreeable thing it is usually conceived to be. The first step may be so; but the subsequent sensations are said to be indescribably delightful!

There were—we are told—under Priessnitz’s care, in 1841, an archduchess, ten princes and princesses, at least one hundred counts and barons, military men of all grades, several medical men, professors, advocates, &c., in all about five hundred! “And, besides this high patronage,” adds the same writer, “Priessnitz has accumulated solid pudding to the amount of £50,000; not from the accumulation of guinea fees, or journeys at a guinea a mile, or occasional cheques of £1000 in nightcaps thrown at the surgeon’s head, but from fees ranging from the minimum of four shillings a week to the maximum of double that small sum, and from the profit arising from his great boarding-house, where his

patients are fed for eight shillings a week, and lodged for four shillings more."

But the reported success of the *Wassercur* is not yet so astounding as that of St. John Long, or of the metallic tractors of Perkins. Among those, in England, who furnished vouchers for the value of the tractors, as therapeutical agents, with their names affixed to their communications, were eight professors in four different universities, twenty-one regular physicians, nineteen surgeons, thirty clergymen,—twelve of whom were doctors of divinity, and numerous other characters of equal respectability; and it was estimated by the London Perkinistic committee, that the number of cures, which had been effected by the tractors up to the period of their report, exceeded *one million five hundred thousand!* And where, it will be asked, is the Perkinistic Institution, where Perkinism itself, now? and Echo answers,—Where? They are both remembered only as the delusions of a by-gone period.

So goes the world. The Rocks and the Brodums, the Solomons and the Eadys, Perkinism and Thomsonianism, Brandy and Salt, Homœopathy and Hydro-pathy,

"In turns appear, to make the vulgar stare,  
"Till the swoln bubble bursts—and all is air."

Happily, one only of those delusions—Thomsonianism—is indigenous with us. The rest are imported. "Why!" says one of the most distinguished of Irish medical philosophers, in a letter to the author, "why do you not send us something in return for the inflictions of

phrenology, mesmerism, homœopathy, &c., which we put upon you?" Yet Great Britain herself has but adopted these. She derived them, with most of her nursery literature, her Jack and the Bean Stalk, her Jack the Giant Killer, her Tom Thumb, and many of her popular superstitions, from intellectual, but imaginative and mystic Germany. Phrenology and mesmerism, homœopathy, and hydropathy, are all German; and undoubtedly, in the minds of most, they are more regarded when administered by a German. Yet, they have not generally met with honour in their own country;—assuredly with far less than elsewhere.

First of all, these moral epidemics fade in their primitive seat. Like many well known pestilences, they cross the western main, rage for awhile, and ultimately sink beneath the western horizon,—to rise, again, however, in the east, in the revolution of ages, but under some new phases, and to follow the same path.

Thus has it likewise been with many popular delusions. Alchemy and the witch-mania of former ages are in the "deep bosom of the ocean buried;" but fortune-telling and astrology yet exist among us;

" And men still grope t' anticipate  
The cabinet designs of fate;  
Apply to wizards to foresee  
What shall and what shall never be."

The Mississippi scheme, the South Sea bubble, and the Tulipomania, were the delusions of former periods; but the nineteenth century has been prolific in similar bubbles, and can offer its wild commercial and land



speculations; its *morus multicaulis mania*, and its joint-stock companies. The same causes are at the root of all popular delusions. They spring from the credulity of man; his love of the marvellous; his unbounded enthusiasm in the prosecution of whatever may hold out prospects for improving his position, and for ministering to his health and comfort. It is idle, then, to attempt to enact laws against empirical remedies or practices only. To do good, they should be directed against all forms of empiricism and delusion; but even then they must fail. The evil is in the natural constitution of the human mind, and does not admit of eradication. The only feasible course is to educate the people; to instruct them in the operations of the human body; to introduce the study of physiology into the common schools; and to steel the youthful mind, as far as practicable, against the arts of the unprincipled and the ignorant.

As for the course of the physician, it is clear. To avoid even the semblance of persecuting any body of men—however insignificant and unworthy—so as to excite undue sympathy for them. All sects, and the followers of all systems, are glad to raise the cry of persecution, and the people are prepared to believe, that instead of the opposition of the profession being honest and upright, it originates in interested and sordid motives. The observing and reflecting physician can derive information from every sect, and from every form that empiricism assumes, or has assumed. Thomsonianism, homœopathy, and hydropathy have all added to the stock of useful knowledge; and physiology

and psychology have been large gainers from phrenology and animal magnetism.

It would seem that there must be some delusion to occupy mankind, and that as one dies a natural death, for it is never destroyed by violence, another always usurps its place, or rather succeeds almost as it were by right of inheritance. As a general rule, mankind are fond of activity on the part of the practitioner; and the worthy and resigned old matron, who exclaimed, when she depicted the last scene of a young acquaintance to an illustrious friend of the author,—“Thank God! every thing was done for him, that could have been, for he was bled seven and twenty times,”—was true to nature.

A recent writer, whose lot has been long cast in a country far removed from our own,—in his “Life of a Travelling Physician,” which is an exceedingly interesting representation of a professional career,—has well depicted this feeling on the part of practitioner and patient. He is describing his attendance, soon after graduation, at a dispensary in London, in the absence of the attending physician. “In a few days,” says Sir George Lefevre, “I was installed in the Doctor’s chair, and was myself become a doctor *de facto*. It required more tact to manage the dispensary pupils than the dispensary patients. I found some of these said pupils my seniors in more than age, and very inquisitive. A good face upon difficulties, and carry all with a high hand. I was an advocate for decided practice, as it is styled; a decided practitioner; and there is no more certain way of imposing upon people, than by

impressing upon them this idea. Say that a man is a decided practitioner, it is enough. Nobody will inquire in what sense, bad or good, this word 'decided' is to be taken. I bled, purged and blistered decidedly, and the cases being of an inflammatory character as upon Gil Blas's *debut*, it happened to be decidedly good practice."

Yet amidst this general feeling amongst the community in favour of the bold, decided practitioner, we have the incongruity of thousands placing their faith in homœopathy, the most inactive system of treatment that has ever been proposed. It deals, however, in profound, unintelligible, and irrational hypotheses, which are arrayed in the imposing forms of the exact sciences, so far as appertains to the numerical divisions and subdivisions of the doses of medicines; and is designated by a name of "thundering sound," derived from a learned language, and as unintelligible to the many as are its hypotheses. The ignorant, therefore, resign their faith at once; whilst the better informed, but scarcely less credulous, endeavour, perhaps, at first to comprehend it; but led to believe that all medicine is a mystery, they find it unfathomable, and surrender at discretion; excusing themselves, if they find it necessary to account for their infatuation, by the assertion, that they yielded to the observation of results. Yet, we have seen that the accurate appreciation of results is at times extremely difficult. That the patient has recovered or died is self-evident; but a knowledge of the precise agency of the different remedies employed may demand a due con-

sideration of all the physiological, pathological, and therapeutical bearings of the subject; and, withal, no little power of discrimination even on the part of the practitioner. An illustration of this is afforded in the well-known case cited by Dr. Paris, in his *Life of Sir Humphry Davy*. Dr. Beddoes, who was a man of rare enthusiasm, having hypothetically inferred, that the inhalation of nitrous oxide gas might be a specific for palsy, a patient was selected for trial, and placed under the care of Davy, at the time assistant to Beddoes. Before administering the laughing gas, it occurred to Davy, that it would be well to ascertain the temperature of the patient's body by the thermometer placed under the tongue. The paralytic,—who had been deeply impressed by the enthusiasm of Beddoes, with the certainty of the success of the remedy, of which he knew nothing,—soon after the thermometer was placed in his mouth, believing that this was the grand curative agent, remarked to Davy that he felt something better. It was suggested, therefore, aside, that nothing more should be done; but he was requested to return on the following day. The same form was then gone through, and with the same results; and, at the end of a fortnight, the man was dismissed cured; no nitrous oxide—no agent of any kind—having been employed, except the thermometer. Now, the result in this case was the cure of the patient, and the only remedy employed was the thermometer. Are we then justified in recording, that the thermometer, placed under the tongue, will cure palsy? Certainly, with as much propriety as we see recorded in homœo-

pathic works, that the north pole of the magnet cures fistula in ano; or a decillionth (a fraction so minute, that the opulent English language is insufficient to express it,) of a grain of flint cures epilepsy. The rational therapist is not, however, satisfied with a knowledge of the mere fact, that the paralysis disappeared after the use of the thermometer. He inquires into the mode in which the result was induced: he is not long in referring it to the influence exerted by the *moral* over the *physique*; and he classes the thermometer, with Perkinism and its congenerous arts, amongst agents, that produce their effects by the new impressions which they make through the senses.

The study of the *History of Medicine* cannot fail to impress the truths just referred to on the mind of the student. He will see, that system after system has passed away, and that drug after drug has been brought forward, with virtues ascribed to it, which have been wholly imaginary; and that, after it has been used for a short period, it has sunk into oblivion; and he will be irresistibly led to the inference, that no theory or practice, which is not based on sound observation, and rigid induction, can long maintain its ground. It has been a common custom with teachers, to commence their lectures on the different departments of medicine, with a history of the rise and progress of each department; but this is as objectionable a course as to place a work on the history of medicine in the hands of a youth, who is just commencing the study. What value, for example, to the student, is the information

that the lacteals were discovered by Aselli, or the lymphatics by Rudbeck, until he has learned the nature of these vessels? Or rather, how infinitely more easy is it for him to recollect the historical truth, after he has attained that necessary information. In accordance with those views, it is advisable, that the student should not peruse a history of medicine, until he has attended one course of lectures on the different branches of medical science; after which,—that is, in the interval between his first and second courses of lectures,—and *à fortiori* after his collegiate attendance has terminated,—he can engage in the inquiry with full advantage.

The study of the history of medicine has been designated by a distinguished lecturer “on the duties and qualifications of a physician,” Dr. John Gregory, as rather ornamental, than essentially useful. Yet his own remarks sufficiently exhibit the weight that ought to be attached to it.

“The history of medicine is not a subject of mere curiosity. To a physician, it is a useful and interesting inquiry. It is indeed an unpleasant task, and, at first view, seems a useless one, to inquire into the numerous theories, that have influenced the practice of physic in different ages. Of these, there has been a succession, which, in their turn, have been admired, and which have greatly influenced the practice of physic, and afterwards sunk into deserved oblivion. If their bad effects had ceased with the follies which gave them birth, it would have been unnecessary to revive their memory. But this has not been the case. A wrong



practice, introduced in consequence of a prevailing theory, soon becomes diffused among people, who are no judges, whether the theory itself be well or ill-founded. A physician of spirit and ingenuity, perhaps, rises up, and shows the absurdity of the theory; but it is not in his power to remove its pernicious consequences in practice. These were soon spread among a thousand ignorant people, who had adapted them to a theory of their own: for it must be observed, that the most illiterate pretenders to physic, have their theories; and such pretenders, partly from ignorance, partly from pride, and partly from habit, are, of all others, the most obstinately attached to them. "A thorough knowledge of the history of physic, by discovering the sources of the maxims and remedies adopted in practice, will naturally make a physician suspicious of those which were introduced by false reasoning or superstition. Yet, it must be owned, that some valuable remedies have sometimes been discovered in consequence of absurd theories.

"Another advantage attending a knowledge of the history of physic, is its bringing us acquainted with some efficacious remedies, which time and other accidents had thrown into disuse. The change of manners, and the variations of our speculative systems of physic, have, in some degree, contributed to the less general use of certain bold, but successful, remedies, employed by the ancients; as might be exemplified in the case of cauteries, the application of various exercises, of frictions, and of unctions, and in other instances. The history of medicine likewise shows us, how the revolutions of time bring

back really the same fanciful hypotheses, which, only by a change of terms, have been repeatedly obtruded on the world.

“Although the progress of medicine, since the age of Hippocrates, has indeed been slow, considering the number and abilities of its professors, yet it has made considerable advancement since that time. The history of physic shows how it has been gradually improved by accidental discoveries, by the rash attempts of empirics, by the accurate and faithful observations of sagacious physicians, and by the sober and diffident reasonings of men of true medical and philosophical genius. Nor should it be thought, that even the most fanciful hypotheses, that have prevailed in physic, have been entirely useless. The zeal of supporting a theory, however false, has given rise to some important experiments. Enthusiastic chemists, who boasted of a command over nature, and trusted to the efficacy of their own medicines, have sometimes performed surpassing cures, and by such remedies as no physician would have ventured on. On the other hand, Stahl and his followers, who trusted almost every thing to nature, have advanced the art by their diligent attention to the history of diseases, and to the operations of nature in performing the cure.”

After two years of collegiate attendance, the student generally presents himself as a candidate for the *summi honores*; and if he has spent his time assiduously, in the manner advised, he will not, generally, have much difficulty in attaining his object. Unfortunately, owing

to the number of medical schools in the country, this is more easy than it ought to be.

The medical faculty, charged with the examination of candidates, have a weighty responsibility attached to them, if they suffer an individual, who is incompetent to exercise the practical duties of his profession, to enter upon his perilous vocation under their sanction; it has not unfrequently happened, indeed, that a graduate of a respectable school has been rejected, when he presented himself before the board of medical examiners of the army and navy, as a candidate for an assistant surgeoncy in one of those branches of the service;—a heavy censure, too often, on the faculty who passed him, and under the authority of whose diploma he was emboldened to present himself before the examining board.

There is, perhaps, too much apprehension entertained, that unusual strictness in the examinations for a degree may injure the school where this prevails; and that, in the multiplicity of medical institutions, the students may resort to such as will pass them with facility; but this feeling of profit and loss should be banished from the minds of every officer of a liberal and enlightened institution: they should be guided by one impulse only—the determination to do their duty, without fear, or expectation of favour or reward; to uphold the dignity of their profession, and to protect the public against the misfortunes of unsophisticated or presumptuous ignorance. Such should be the sentiment of every one, who holds the responsible situation of a medical examiner, and the student ought to feel, that

there is but little honour in a diploma, which is awarded on insufficient attainments.

It is too frequently the custom, with one who is preparing for his final examination, to follow the objectionable course—on which animadversions were made in an early part of this chapter—of endeavouring to devour every thing that has been written on the different departments of medicine; and, consequently, when the period of trial arrives, although he may be literally crammed with information, his mind is in the state of a well-stocked but miserably arranged warehouse, in which nothing is available at the time it is wanted. Far better than this is the custom of establishing what are termed, in the American colleges, ‘quizzing clubs,’ in which, by mutual interrogation, the topics, that have been discussed by the different professors, are constantly revived, and re-impressed upon the minds of the members,—not, simply, a short time before the period for the examinations for a degree, but throughout the whole of the session. If these examinations be regularly kept up, and the plan of study, which has been inculcated in these pages, be assiduously pursued, the candidate will always be more ready, and far better prepared for the exercise of his profession, after graduation, than he, who, by incessant ‘grinding’ a short time before examination, has been ‘made up’ for the crisis, and whose knowledge evaporates with the excitement that gave it birth.

## CHAPTER IV.

## MEDICAL EDUCATION, &amp;c., AFTER GRADUATION.

WHEN the student has attained the *summi honores* of his profession, he ought not—it need hardly be said—to imagine, that he has arrived at proficiency,—that he has attained all knowledge respecting the intricate movements of the human economy, in health and in disease. The diploma, in reality, only shows to a discerning public, that the mind of the young practitioner has been imbued with the principles of medical science; and that he is prepared, at the outset, to profit by every opportunity for observation; to trace the nature of disease from indications that may be afforded him, and to apply his remedies to such disease, guided by all the lights, that illumine the profession in its present improved condition.

The graduate is now about to take his place in society, in the practice of a profession unusually arduous and responsible; requiring untiring zeal and industry,—the exercise, indeed, of every faculty that exalts the mind, and of every feeling, that adorns the heart;—a profession, to the members of which one of the greatest ornaments of the law—Sir William Blackstone—has assigned pre-eminence for “general and extensive knowledge,” and of whom the late learned philologist, Dr. Parr, remarked:—“While I allow, that peculiar

and important advantages arise from the appropriate studies of the three liberal professions, I must confess, that in erudition and science, and in habits of deep and comprehensive thinking, the pre-eminence, in some degree, must be assigned to physicians;”—a profession, the practice of which, in the opinion of one of the first of the Romans, Cicero, elevated man as near to the gods as any other avocation;—“*homines ad Deos nulla se proprius accedunt quam salutem hominibus dando;*” and of which J. J. Rousseau said to Bernardin de Saint Pierre, in speaking of physicians;—“there is no condition which requires more study than theirs; in every country, they are the most truly useful and learned of men.”

It is this honourable—this dignified calling—which the young physician is expected to support, not simply as a means of acquiring an honourable subsistence, but as a science connected with the best interests of humanity. In the exercise of this calling, he should proceed circumspectly, yet with zeal amounting to enthusiasm. Let him carefully avoid being wedded to any exclusive sect or system,—an attachment to which has strikingly retarded the progress of true science. Let him watch, with philosophy and diligence, the march of nature, discarding all blind empiricism; and, by this course, he will find, that each subsequent day will add to his stock of useful knowledge, and that many points, which seemed at first veiled in obscurity, will stand forth in bold relief; whilst, on others, he may continue to hesitate, owing to the very nature of the subject,—the intricate, the mysterious mechanism of life.



A main object with every scientific practitioner should be the establishment of great general principles of pathology and therapeutics. The practice of medicine has been ruined by undue confidence being reposed in special remedial agents as adapted to special morbid conditions. A remedy may have been administered in a particular case of disease, and the disease may have terminated favourably; yet the result may have been, in nowise, referable to the ascribed cause. Hence, the value of that careful system of observation, which has been practically inculcated by observers,—of recent times, more especially.

In the common method of routine practice, the physician has but little time—if much engaged in the active exercise of his profession—to enter into a careful examination of every circumstance, that may have exerted an influence upon the condition of his patient: he prescribes for what appear to him the most prominent symptoms; has, too often, unbounded faith in the prescribed remedy; and if he should find the disordered action modified at his next visit, it is easier, and more gratifying, for him to believe, that the result has been produced by his agency, and through his prescription, than to inquire into the other modifying circumstances, that may have been present, and in operation. He is thus led, authorized—as he conceives—by experience, to register as a fact that which may have been far otherwise; a sinister influence may thus be exerted on his future practice, by his being induced to place reliance on agents, which may be either inert, or incapable of fulfilling indications based upon rational general princi-

ples. The tendency of the popular—and, indeed, of the professional—mind is to search after ‘facts,’—too often perhaps to the exclusion of principles, on which, after all, the improvement of medicine has to repose. Facts must furnish the pabulum for such principles, but these alleged facts must be carefully sifted, must be over and over again proved; and, if this course be pursued, the large mass will be found to belong to what have not inappropriately received the epithet ‘false.’

A modern writer, Professor Bigelow, has gone so far as to assert, that we are seldom justified in ascribing effects to our remedial agencies, employed in any disease, until we have satisfied ourselves, that cases, exactly similar in time, place, and circumstances, have failed to do equally well under the omission of those remedies. This is a kind of knowledge, that can only be derived from experience; but it is so repugnant to the feelings of mankind,—who like to see activity on the part of the practitioner,—as well as to the mode in which practitioners are usually educated, that the materials for a just comparison are not readily attainable; nor, perhaps,—unless we consider, that the comparison has not been previously and fairly made,—ought they to be so, inasmuch as the doctrines, admitted by the profession, and inculcated in the schools, are presumed,—and in general correctly,—to be based upon observation; although, in many cases, that observation has, doubtless, been inadequate. “The benefit,” says an intellectual writer, Dr. Abercrombie, “which a physician derives from his own opportunities of observa-

tion, in common language called his "experience," is not in proportion to the period of time over which it has been extended, or the number of facts which have passed under his view. It must depend on the attention with which he has observed these facts and traced their relations to each other; on the anxiety with which he has separated incidental relations from those which are uniform, and the caution with which he has ventured in assuming the relation of cause and effect, or has advanced to general principles. It must depend, farther, on the jealousy and suspicion with which he has received even his own conclusions, and the care with which he has corrected them from time to time by farther observations. Finally, it must depend on the judgment with which he applies the knowledge thus acquired to the investigation and treatment of new cases; by tracing promptly the points of affinity between the case under his view, and those cases on which his knowledge was founded; by discovering real points of resemblance where there is an apparent difference, and real points of difference where there is an apparent resemblance. The farther a physician advances in this course of rigid inquiry, he becomes more sensible of the difficulties with which his science is encumbered, more suspicious of all general conclusions, and more anxious to bring them to the test of minute and extensive observation: in particular, he learns to exercise more and more caution in considering any one event in medicine as the cause of another. In real acquisition, consequently, his progress is slow; for much of his improvement consists in detecting the fal-

lacy of systems, which he once considered as established, and the instability of principles, in which he once confided as infallible. But these discoveries prepare the way for his actual progress, and the conclusions at which he does arrive then fall upon his mind with all the authority of truth."

At the present day, we rarely swear in the words of the master; but still we do not think sufficiently for ourselves; and any view which will spare us the trouble of deep investigation, is embraced by too many, with eagerness. The systems of Brown and of Broussais were seductive, in this way, from their simplicity. If most diseases could be classed, either as diseases of excitement or of depression, and if tables were given of those that belonged to the one or the other class, it was but necessary to observe phenomena; to diagnose the disease, in other words; to refer to the tables, and the treatment was obvious. If every malady were a form of inflammation of the stomach and bowels, the labour of diagnosis would be spared, and the management would have to be conducted in accordance with rules laid down by the great systematist who has recently passed away from us. These royal roads have existed in all ages, and the views of Brown had for their archetypes the *strictum* and *laxum* of Themison, and the old methodical school.

A learned and venerated teacher—Professor James Gregory, of Edinburgh—who did not fail to express his sentiments frankly, as he ought, to his class, was in the habit of repeating the expression, that there are in medicine more false facts than false theories; a position

that scarcely admits of dispute—if for no other reason, than that theories are few, whilst recorded “facts,” as they are termed, are almost innumerable. It is humiliating to refer to our medical Journals of former days, and also of the present, and to observe what multitudes of “facts,” or observations, have been recorded; to remain, like the registers of the meteorologist, as testimonials, *monuments* of industry, and, like monuments, recording only the actions of the dead.

The London Medical and Physical Journal, commonly known as the “yellow journal,” from the colour of its cover, was in existence we will suppose *sixty years*. It appeared regularly on the first of every month, and contained, on the average perhaps, five “original communications,” so called;—“facts,” which had fallen under the notice, and had probably excited the deep interest of the authors. In sixty years, then, not fewer than *three thousand six hundred facts* were published in the pages of that journal alone. And how many of these are now referred to by the profession? Dare we say five? How melancholy to reflect, that so little advantage has resulted from so much time and thought bestowed upon matters, each of which appeared to the writer so replete with interest to science and to mankind; and not one of them perhaps that was not brought forward as the results of personal observation or experience! Must we not infer from this the intrinsic difficulties of correct observation; and, at the same time, the too ready admission of facts, founded upon fancied experience?

These remarks must not be understood as dispa-

raging the results of experience—of true experience, which necessarily forms the basis of all correct practice. It is on the fallacies of experience that we animadvert; for on them are founded, not simply the errors of the medical practitioner, but every idle phantasy and form of quackery that has ever prevailed.

A modern intelligent writer—Dr. Holland—has been fully impressed with this. “It must be admitted, indeed,” he says, “that this matter of medical testimony is too lightly weighed by physicians themselves; else, whence the so frequent description of effects and cures by agents put only once or twice upon trial, and the ready or eager belief given by those who, on other subjects, and even on the closely related questions of physiology, would instantly feel the insufficient nature of the proof. Conclusions, requiring for their authority a long average of cases carefully selected, and freed from the many chances of error and ambiguity, are often promulgated and received upon grounds barely sufficient to warrant a repetition of the trials which first suggested them. No science, unhappily, has abounded more in false statements and partial inferences; each usurping a place for the time in popular esteem, and each sanctioned by credulity, even where most dangerous in application to practice.” “During the last twenty years,” adds Dr. Holland, “omitting all lesser instances, I have known the rise and decline of five or six fashions in medical doctrine or treatment; some of them affecting the name of systems, and all deriving too much support from credulity, or other causes, even amongst medical men themselves.”



And if this credulity, and defective reasoning and observation exist among ourselves; if the *propter hoc* be so often confounded with the *post hoc* by us; can we be surprised that the unprofessional should exhibit these defects still more glaringly, and that they should even be encouraged by what they witness in us? How often are we not now doomed to meet with cases of false reasoning scarcely less extravagant than one which was narrated centuries ago.

“Here, now,”—says Bishop Latimer, in the last sermon, which he preached before Edward the Sixth of England—“Here now,” said he, “I remember an argument of Master More’s, which he bringeth in a book, that he made against Bilney; and here, by the way, I will tell you, a merry toy. Master More was once sent into Kent, to try (if it might be) what was the cause of Goodwin Sands, and the shelves that stopt up Sandwich-haven. Thither cometh Master More, and calleth the country before him, such as were thought to be men of experience, and men that could of likelihood best certify him of that matter concerning the stoppage of Sandwich-haven. Among others came in afore him an old man with a white head, and one that was thought to be little less than an hundred years old. When Master More saw this aged man, he thought it expedient to hear him say his mind in this matter, for, being so old a man, it was likely that he knew most of any man in that presence and company. So Master More called this old aged man unto him, and said: ‘Father,’ said he, ‘tell me if ye can, what is the cause of this great arising of the sands and

shelves here about this haven, the which stop it up, that no ships can arrive here? Ye are the eldest man that I can espy in all this company, so that if any man can tell any cause of it, ye of likelihood can say most in it, or, at least, wise more than any other man here assembled?' 'Yea, forsooth, good master (quod this old man) for I am well nigh an hundred years old, and no man here in this company any thing near unto mine age.' 'Well, then,' quod Master More, 'how say you in this matter? what think you to the cause of these shelves and flats that stop up Sandwich-haven?' 'Forsooth, sir,' quod he, 'I am an old man. I think that Tenterton steeple is the cause of Goodwin sands. For I am an old man, (quod he) and I may remember the building of Tenterton steeple, and I may remember when there was no steeple at all there. And before that Tenterton steeple was in building, there was no manner of speaking of any flats or sands that stopped the haven; and therefore, I think, that Tenterton steeple is the cause of the destroying and decaying of Sandwich-haven.'

This anecdote was told three hundred years ago, and was brought forward by its learned narrator to exhibit the faulty reasoning which then prevailed: yet it appears strikingly applicable to more recent times, and even to the period in which we live. It is good, indeed, to satisfy ourselves on this point, in order that we may learn to apply the proper remedy. We are apt to revert to antiquity for elucidations of the wild and the visionary, the offsprings of superstition and credulity; yet we need not cast our regards back so far. In

running over the pages of our dispensatories, published even in modern times, we have sufficient evidences of the faulty condition of experience and reflection as they then existed, to serve as a point of comparison with those of the present day; and the credulity exhibited in them has a tendency to make us perhaps unduly skeptical in regard to many of the records of individual experience even now. We are bound to give every credit for honesty of purpose to the eminent individuals who framed the pharmacopœias of the different colleges of Europe; but we are equally compelled to say, that they must have been grievously mistaken, else our brethren of still more recent periods must have erred in subsequently excluding those very agents from the lists of the *Materia Medica*. Certainly, we have no article of the *materia medica* capable of answering all the virtues that were formerly ascribed to vipers. "The main efficacy of the viperine flesh," says Mead, one of the most distinguished men of his day—a hundred years ago—"is to quicken the circle of the blood, promote its due mixture, and, by this means cleanse and scour the glands of those stagnating juices, which, turning to acidity, are the origin of many at least of those troublesome distempers on the surface of the body, which go under the names of scrofulous, leprous, &c." It would be easy to bring forward the names of many men eminent in their day, who appeal to "long experience" in confirmation of the virtues of this article of the *Materia Medica*, now never heard of amongst us, except as a matter of medical history, although it, as well as the lungs of the fox, used in

pulmonary affections; young puppies, formerly regarded as nervines; the dried liver of the mad dog, employed in hydrophobia; the lizard, for a long time esteemed as a diaphoretic and antisymphilitic; the dried toad, supposed to have a diuretic virtue, with numerous other offsprings of absurdity, still lingers in certain pharmacopœias, and is registered in the "Pharmacopœia Universalis" of Jourdan.

Every one of these articles, let it be borne in mind, was introduced on the recommendation of eminent physicians, and, before it could be received, must have been passed upon by a majority of the members of the college concerned in the formation of the Pharmacopœia. Ought we not, then, to exert a judicious skepticism before we receive the results of so-called experience, unless we are satisfied, that ample opportunities, and adequate powers of observation and reflection have really sanctioned them? In the case of all the articles mentioned above, subsequent experience showed that the effects were *consecutive* rather than *consequent*, and they were properly discarded. They were examples of delusion not exceeded, except in notoriety, by those to which reference has been made—a species of delusion from mistaking the *post hoc* for the *propter hoc*, which, as Dr. Paris remarks,—when investigating the revolutions and vicissitudes that remedies have undergone in medical, as well as popular opinion,—reminds one of the story of the Florentine quack, who gave the countryman six pills, which were to enable him to discover an ass that he had lost. The pills were cathartic, and beginning to operate on his

road home, he was compelled to retire into a wood, where he found his ass. The clown soon spread a report of the wonderful success of the quack, who, doubtless, as Dr. Paris remarks, reaped an ample reward from the proprietors of strayed cattle!

The same kind of fallacy of experience leads to those idle fashions in regard to particular remedies, which, like all hobbies, have attracted merited ridicule. The witticisms of Molière and of Le Sage were founded on follies that doubtless existed at the time in the profession, and that are still not unfrequently witnessed. We daily, indeed, notice the failings of the profession reflected in the credulities and absurdities of the people. Even in professional history, we find that epithets have been applied to classes and to individuals, which have been acquired in this manner. These are more common amongst the mercurial French, who are eminently alive to the ludicrous; and, accordingly, we even see admitted into the French medical lexicons the title of *médecins stercoraires* applied to those who are accustomed to treat all diseases by purgatives—*repurgare et rechloriser*, to use the language of a great satirist. When, too, acupuncture was revived in France,—for it, as well as moxibustion, is an old Chinese and Japanese operation,—it was so extensively and indiscriminately employed in the French hospitals—not more than thirty years ago—that the patients in one of them actually revolted against the *piqueurs médecins*, or “pricking doctors;” as they called them. We smile at the credulity of the author of a Japanese treatise on the moxa, who oracularly proclaims as the results,

doubtless, of his experience, "Chap. 3. Women, who have done breeding, must have three cones burnt on the navel:" "Chapter 4. Women, that would be glad to have children, must have eleven cones burnt on the side of the twenty-first vertebra;" yet on the revival of the Chinese operation of acupuncture, it was employed in fractures, and other cases almost as irrationally. Impressed with the value of colchicum as a sedative agent, a valued friend, now no more, who was one of the first to draw attention to this article of the *Materia Medica* as a substitute for blood-letting, published a number of cases of whitlow, in which he conceived its internal use had effected a cure; and we are daily astonished to hear of the insignificant cases in which the fashionable remedy—most valuable in appropriate cases—the iodide of potassium, has been employed. Wherever enthusiasm exists in regard to the action of any article of the *Materia Medica*, ample allowances must be made; otherwise the sober, cool observer, who repeats the trials with it, will inevitably be disappointed. It is to be deplored that any enthusiasm, sufficient to cause a remedy to be what is called "fashionable," should ever exist among us. The very epithet is significative of change; that change inevitably occurs, and then we have another record of the vacillation in medical practice, of which the public eagerly lay hold, when they have to assign reasons for having recourse to the medicines of the charlatan.

All addiction to exclusive methods of treatment, on the part of the profession, is to be regretted; and hence we regard with sorrow, not unmixed with feelings of



a less complimentary character, those who leave the profession they have embraced to join any system, which professes to have discovered a mode of attaining, by easy steps, that which has engaged the close and patient investigation of the most gifted for ages; whilst unmixed contempt is combined with our regret for those who, from mercenary motives, debase themselves to a level with the most ignorant empiric.

No single circumstance, at the present day, tends more to the retardation of therapeutics than unbounded confidence in drugs; in the adaptation of special articles of the *Materia Medica* for special morbid conditions. The man of the clearest views has the greatest simplicity in prescribing, and employs the fewest agents. Not one is added without a clear and definite object: but he, whose intellect is confused, or who is perplexed in the diagnosis, or with the treatment, is apt to throw together the most heterogeneous and often opposing substances, so as to justify the somewhat censorious, but too true, remark of a great medical philosopher, that "it is easier to prescribe than to think." The young graduate too frequently commences his career with unbounded confidence in the panoply with which he can combat disease; he is not long, however, in practice, before he discovers that his confidence in drugs must be materially diminished; and before he has attained a single lustre, his faith has become less and less reposed in individual articles of the *Materia Medica*, and more in the great principles of *Higiène* and *Therapeutics*.

In country practice the evil of over-prescribing can-

not exist so readily as in towns. The neat, compact case on the crupper of the practitioner's horse conveys all the remedies that he employs in ordinary cases; and is doubtless amply sufficient. "Give me," says one of the most distinguished surgeons of modern times—Sir Astley Cooper—"give me opium, tartarized antimony, sulphate of magnesia, calomel, and bark, and I would ask for little else. These are adequate to restore all the actions of the body, if there be power of constitution to admit of the restoration; and disease, as far as I know, is either itself a deviation in the performance of some function, or at all events is always marked by such a circumstance."

This is the language, not of a great medical philosopher, but of one who had been more extensively engaged in the practice of his profession than any other person, perhaps, of ancient or modern times. It will be admitted, that his annual income of upwards of twenty thousand pounds sterling, or one hundred thousand dollars, wholly derived from his profession, is an index of unequalled professional employment. The list of Sir Astley is, however, too much restricted; and it excludes some of the most valuable and most energetic articles of the *Materia Medica*. But although one slightly more extended might be adapted for most cases of disease that present themselves to the practitioner, it is indispensable for him to be practically acquainted with the modes of preparation, and uses of a much larger number. Hence, pharmacopœias and dispensatories are prepared as guides to him in these matters; and hence, on the occasion of the last revision of the

Pharmacopœia of the United States, the Author's learned friends, with whom he had the pleasure and the profit of being associated, and himself did not feel themselves justified in farther reducing the number of articles of the *Materia Medica*, and of the preparations. Yet, although opulent, too opulent, perhaps, it stands in marked contrast with the older works of the same kind; as marked as the present methods of observing, and of recording observations, contrast with those of former periods.

Every practitioner endeavours to carry in his recollection the precise difference which he notices from day to day in the condition of his patients; but this must be far inferior to the record which he daily makes approximately by numbers, from which he can deduce his averages. Averages and numerical methods can in no case, however, afford more than an approximation to the truth; yet the approximation is closer than can be attained in any other manner; and perhaps, as a recent eminent writer has remarked, "through medical statistics, may be the most secure path into the philosophy of medicine." In an extensive practice this method may not be easy; but the difficulties constitute no real objection to the value of the plan for shedding light on the history of disease. Statistics are not, however, so easy of application to therapeutics,—confessedly the most difficult of all the departments of medical sciences, because on it is concentrated a knowledge of every other; and it requires not merely correct observation, but the constant exercise of the reasoning power. Hence, in part, why diagnosis is so much more attended to than therapeutics, the treat-

ment of disease, in other words,—which, after all, is the final object of the science of medicine. The extent to which the mind of the observer was at one time, and recently, monopolized by one form of observation, physical diagnosis, was really lamentable. In many of the hospitals, of France more especially, the great object of the attending physician appeared to be to discover the nature of the disease; and the treatment was left to the *élève interne*, or resident physician. So is it at the present day with hæmatology, or observation of the blood. Blood is there drawn in all diseases, in order to detect, by the nicest evaluation, the ratio of its main constituents to each other; and after this has been determined, but little attention is, in too many cases, paid to treatment.

Still, notwithstanding all this, and the intrinsic difficulties of the subject, we have seen that therapeutics has experienced, of late years, eminent improvement.

In aiding the young practitioner to attain necessary and correct experience, it is very desirable—where it can be effected—that he should reside for a time in some hospital, infirmary or almshouse. To the large mass of students, this course will be impracticable, inasmuch as but a limited number can be admitted; whilst the circumstances of many would preclude them, were they ever so desirous. To such as can effect the object, nothing but benefit can accrue,—especially if the attending physician and surgeon be well acquainted with their profession; be faithful observers, good therapeutists, and able and willing to communicate to the student all that they themselves know, the grounds for

their judgment, and the mode in which they propose to carry into effect the suggestions of such judgment. In an institution thus conducted, the student becomes conversant not only with the great points of practice, but with the minor operations of bleeding, bandaging, &c.; with the art of compounding prescriptions,—if previously unacquainted with these important duties,—and is enabled to enter upon independent practice, with all that confidence in his resources, which familiarity in their adaptation can alone communicate.

When Dr. Samuel Johnson somewhat splenetically defined the profession of physic as “a melancholy attendance on misery; a mean submission to peevishness, and a continual interruption of pleasure,” he was constrained to admit his belief, that “every man has found in physicians great liberality and dignity of sentiment; very prompt effusion of beneficence, and willingness to exert a lucrative art, where there was no hope of lucre.” It was of such beneficent practitioners, that Voltaire,—almost in the language of Cicero, already cited,—remarked: “The man who is occupied in restoring health to his fellows, from pure benevolence, is far above all the grandees of the earth: he belongs to the divinity.”

Gratifying, indeed, must it be to the medical philanthropist to know, that he has relieved the sick from pain,—snatched him, perhaps, from the jaws of death,—and doubly gratifying, if he can feel the conviction, that the result has been brought about by the sedulous study of his profession; and by the care and attention he has bestowed in watching the rise of every symptom;

meeting it at its onset, and arresting its development before it had laid fatal hold of the sufferer. Independently of all hope of pecuniary remuneration, the pleasing result of his well directed, and skilful efforts is of itself ample recompense to the compassionate.

An excellent and eloquent writer, Dr. John Gregory, to whom allusion has already been made in these pages, and whose work ought to be perused, and re-perused, by every practitioner of medicine, regards humanity as the chief of the moral qualities, peculiarly required in the character of the physician. "Sympathy," he observes, "produces an anxious attention to a thousand little circumstances, that may tend to relieve the patient; an attention, which money can never purchase;—hence the inexpressible comfort of having a friend for a physician. Sympathy naturally engages the affection and confidence of a patient, which, in many cases, is of the utmost consequence to recovery. If the physician possesses gentleness of manners, and a compassionate heart, and what Shakspeare so emphatically called "the milk of human kindness," the patient feels his approach like that of a guardian angel ministering to his relief; while every visit of a physician, who is unfeeling and rough in his manners, makes his heart sink within him, as at the presence of one who comes to pronounce his doom. Men of the most compassionate tempers, by being daily conversant with scenes of distress, acquire in process of time that composure and firmness of mind so necessary in the practice of physic. They can feel whatever is amiable in pity, without suffering it to enervate or unman them.



Such physicians as are callous to sentiments of humanity treat this sympathy with ridicule, and represent it either as hypocrisy or as the indication of a feeble mind. That sympathy is often affected, I am afraid is true. But this affectation may be easily seen through. Real sympathy is never ostentatious: on the contrary, it rather strives to conceal itself. But, what most effectually detects this hypocrisy is a physician's different manner of behaving to people in high and people in low life; to those who reward him handsomely, and those who have not the means to do it. A generous and elevated mind is even more shy in expressing sympathy with those of high rank than with those of humbler life; being jealous of the unworthy construction so usually annexed to it. The insinuation, that a compassionate and feeling heart is commonly accompanied with a weak understanding and feeble mind, is malignant and false. Experience demonstrates, that a gentle and humane temper, far from being inconsistent with vigour of mind, is its usual attendant; and that rough and blustering manners generally accompany a weak understanding and a mean soul, and are indeed frequently affected by men void of magnanimity and personal courage, in order to conceal their natural defects."

Sympathy for suffering, and that benevolence to the distressed, which droppeth

"as the gentle rain from heaven  
Upon the place beneath,"

have, indeed, ever been the proud attributes of the medical profession.

In no profession are the noblest attributes of the head and heart more elicited. What calling is so well calculated to exhibit in bold relief those sentiments that adorn the mind of man? The practitioner, busily and actively engaged, has his feelings constantly and painfully excited; and the doer of good works—the active dispenser of charity, of whom we see so many honourable examples around us, and every where, visiting the miserable cabin of the poor and the afflicted—would spurn the idea, that familiarity with scenes of wretchedness has rendered him less susceptible of the kindlier sympathies. Cities furnish numerous examples of professional beneficence, but the extent to which it is carried is exhibited more conspicuously in country situations. Day after day—night after night—is the country practitioner summoned at a moment's warning to leave his home,

“the resort  
Of love and joy, of peace and plenty, where,  
Supporting and supported, polish'd friends  
And dear relations mingle into bliss.”

to travel—perhaps at the hour of midnight—through pathless wilds, and exposed to the pelting of the storm, to visit some poor inmate of a wretched hovel, from whom he neither expects nor asks for compensation.

Look, again, on the daily evidences presented to us of the physician, who is endowed with that sensibility, which, like mercy “is not strained,” gladdening the hearts of the sick, and of the anxious relatives, by visits which he pays without the slightest expectation of pe-

cuniary reward, and which, indeed, could not be compensated by any remuneration whatever.

The most trying cases, to the young practitioner especially, are those in which all earthly hope is lost, and where every resource of art has been found unavailing. Even here, however, the attention of the physician is most consoling. It is, indeed, his duty to persevere unremittingly in his cares, however distressing this course may be to his feelings, and—until the very last—to smooth the pillow of affliction. A euthanasia or easy death may be facilitated, it is supposed, by his agency, and hence his aid is sought for until dissolution is inevitable and approaching.

It is scarcely necessary to dwell on the importance, to the young physician, of attending to his address; of adopting a kind and soothing manner; and of impressing his patient with a conviction, that he is feelingly alive to his welfare;—or to urge the advantage of his possessing gentleness and flexibility, to bear patiently—and with apparent cheerfulness—the contradictions and disappointments to which the best are occasionally exposed; and of gratifying the whims and caprices of his patients, so far as he can do so with propriety; but he must be careful not to have it supposed, that he has not firmness to resist a proposition, which is, in his opinion, contrary to their interests, however grateful it may be to their inclinations. When once the authority of the physician over his patient is lost, indifference is apt to be engendered; confidence is gone, and contempt and estrangement follow.

Nor is it requisite, that the advantages of tempe-

rance and sobriety should be inculcated,—virtues, which—although expected and demanded of all—are peculiarly required of the medical practitioner. It is not the author's province, to point out here, the numerous—the awful—evils, temporal, and eternal, that follow in the train of intemperance; nor need he dwell on

“all the kinds  
Of maladies, that lead to death's grim cave,  
Wrought by intemperance.”

The physician must recollect, that he is often the arbiter of life or death; that the hopes of an afflicted family are reposed on his exertions; that a heavier weight of responsibility is cast upon him, before God, than could perhaps exist in any other situation; and let him reflect for a moment, how utterly unfit—“with memory confused and interrupted thought”—he would become to exercise a profession, which requires, above all others, an unmixed exertion of judgment, clearness of thought, and absence from all perplexity and unsteadiness; which demands, in short, the lively and vigorous employment of every intellectual and moral faculty.

Neither is it necessary to expatiate on the importance of the young practitioner's possessing presence of mind to adapt him for every sudden and trying emergency, of which he must be destined to meet with many, in his surgical career more especially; nor on his obligations to secrecy, discretion, and honour. It is sufficient to name these qualifications, in order that their value shall be seen. So long ago as the first pro-

mulgation, of the oath, ascribed to the father of physic, but which does not appear to date farther back than the school of Alexandria, these requisites were urged upon the graduate; and an oath, binding him to the discharge of these and other points of professional duty, was always administered, when he was declared worthy of being admitted to the practice of his profession. The oath, even now required in the University of Edinburgh, calls upon the graduate “to practise physic *circumspectly, correctly, and honourably* (cautè, castè, probèque;) and faithfully to have recourse to every thing conducive to the health of the bodies of the sick; and, lastly, never—without great cause—to divulge any thing that ought to be concealed, which may be heard or seen during his professional attendance. To this oath,” the instrument adds, “let the Deity be witness.”

It too often happens, that the young practitioner,—flushed with his own estimate of his talents and attainments, and despising—what he conceives to be derogatory—the employment of any arts to succeed in his profession,—is too little attentive to some of those collateral circumstances that have been enumerated. A neglect of them is, however, injustice to himself, inas-much as mankind are long in discovering virtues, until they are presented to them with some adventitious aid. Hence it is, that tact is generally so much more successful than talent, and that many practitioners succeed, by the possession of those collateral advantages, to a greater degree than ability alone would ever have justified. Some few, it is true, have risen to unusual emi-

nence in their profession solely by their distinguished talents, and, occasionally, when their manners have been rough and presumptuous; but the cases are extremely rare. Eccentricity—as these moral aberrations have been sometimes mildly designated—may succeed for a time, where the intellectual qualifications are lofty; but, it may be safely said, never to the extent, that these qualifications would have carried the possessor, in the absence of such defects; and, frequently, the effect of elevated talents and acquirements is completely counteracted by some deficiencies in the moral qualities.

The public, as we have seen, are singularly ill-informed regarding the qualifications of the medical practitioner, and the skill of the physician is commonly estimated by a fancied success, or want of success, in practice,—one of the most uncertain criteria, that can well be conceived. Were each of two physicians to have a patient under *precisely* analogous circumstances, the degree of success, obtained by one or the other, might be a sufficient measure of skill. But it is impossible for us to say, in all cases, even by previous accurate examination, that there may not be modifying circumstances in the one case, that do not exist in the other, and that might account for one being brought to a satisfactory termination, and the other not. If ten individuals be exposed to precisely the same morbid agency,—say to cold and moisture applied to the feet,—all may not have the same effect induced. One may be attacked with inflammatory sore-throat, another with catarrh, a third with diarrhœa, whilst others may



remain in health; yet all these different results have succeeded to the application of the same cause; and disease has attacked one individual and texture rather than another, according to the greater predisposition of such individual and texture, at the time, to assume diseased action.

Now, that which happens to *morbific*, happens also to *remedial* agencies, and it presents one of the greatest difficulties in therapeutics. Hence, the impracticability of deducing any correct inferences, regarding the comparative skill of different practitioners, from the results of practice alone.

It is in consequence of the public being such imperfect judges of professional merit, that more practitioners succeed by their personal, than by their professional, qualifications. A professional friend of the author, —now no more—himself distinguished as a man of science, and successful in his avocation—has expressed the opinion, that if we analyze, as it were, the different practitioners who present themselves to our notice, we may always discover the causes of their success, or want of success, in life. It may be seen, that in one man, an excellent address, a soothing manner, a real or assumed interest in the welfare of his patients, and, above all, a scrupulous and unwearied attention in gratifying patients and their friends, by falling in with their views, have been sufficient to lead even a superficial practitioner to the summit of his profession; whilst, in another person, marked defects of manner and appearance, provided good conduct be present, may not have prevented him from equally

rising to professional eminence, if his acquirements authorize such an elevation.

At the same time, it must be admitted, that good fortune has much to do with this. A man of genuine merit, and well adapted, in every respect, for the practical exercise of his profession, may linger in comparative obscurity, unless some fortunate circumstance should bring him prominently before the public; whilst we have too many instances to show, that the ignorant and the presuming occasionally push themselves into notice, and succeed to a degree, which is denied their more deserving—but less arrogant—brethren. The success of quackery—and that even of the most bare-faced kind—sufficiently exhibits how easy it is to rise on the credulities and weaknesses of mankind.

In conclusion:—although the present work is not intended to comprise the subject of professional ethics; it may be well to remind the young physician, that independently of his duty to those who may be placed under his healing care, there is one, which he owes to his professional brethren, as well as to his fellow-men in general. This duty is the foundation of all medical etiquette; and, although the anxious relatives of the sick are often incapable of appreciating the object of such etiquette, it reposes simply on the heaven-descended injunction—the great basis of all ethics;—“Whatsoever ye would, that men should do unto you, do ye even so to them.”

This clear and comprehensive principle of human action commands us to exercise justice and benevo-

lence towards our fellow men,—a principle, which, if observed by all, could not fail to add largely to the amount of human happiness and prosperity. Yet—strange to say—a violation of this great rule of conduct is so common amongst the members of a profession, which is, in its essence, most dignified, most exalted, most liberal, and, as a recent writer—Dr. Ryan—has expressed it, “the most noble and disinterested of human avocations,” that the disagreement of physicians has become proverbial; the profession has been discredited, and ridicule and contempt have been cast upon it, owing to the delinquency of those, who, from defective manners, feelings, or education, ought never to have been admitted within its pales. Too often, also, this ungenerous conduct is suggested by base ambition, or by the love of lucre, in minds devoid of the kindlier sympathies, and careless of the honour and advancement of the science.

It is unhappily too easy for an ungenerous individual, if possessed of tact, to create an unfavourable impression, in the minds of a distressed family, against his more distinguished brother, and to make a

“name that was as fresh  
As Dian’s visage, now begrim’d and black.”

The public cannot well discriminate the man of science and philanthropy, from the unprincipled pretender. Pretension is, accordingly, too often received as evidence of capacity; and this facility of belief is the cause, as before remarked, why empiricism—in and out of the profession—meets with so much success.

Yet the unprofessional empiric is a character far more exalted than the physician, who, from malevolence, or envy, or any sordid motive, openly, or by insinuation, undermines a reputation,—

“Whose cordial drops once spilt by some rash hand,  
Not all the owner's care, nor the repenting toil  
Of the rude spiller ever can collect,  
To its first purity and native sweetness;”

and who attempts to elevate his dishonest self on the ruins of his fellow man—his professional brother: he may flourish for a time: he may vegetate in fungous luxuriance; but his feeble vitality will not withstand the chilling blasts of scorn; the leaf, whilst yet green, will be seared, and he will sooner or later sink into that insignificance from which he ought never to have emerged.

The young physician should determine to follow the dignified calling he has chosen ‘circumspectly, correctly, and honourably.’ He should be impressed with the responsible character with which he is invested. He should feel, that the true dignity of medicine is to be maintained by the superior learning and abilities of those who profess it. His manners and address should be liberal and polished; compassionate and gentle. He should be open and candid,—disdaining all artifice. Then may he set at nought the ridicule and abuse, to which the science has been exposed, from those who are unacquainted with its character and resources. Prosperity and happiness will attend him. The in-

fant, on the maternal lap, will be taught to lisp his name with gratitude: the widow and the fatherless—even in their bereavement—will bless his skilful and benevolent exertions, though unsuccessful: the affectionate parents, who have watched over his youth, and witnessed, with solicitude, his ripening manhood, will glory in him: his Alma Mater, which shed upon him her highest honours, will cherish him, as the fond mother cherishes her offspring; and his country will be proud to rank him amongst the most useful and the most meritorious of her citizens. The pathway for professional distinction is narrow, but it is open to all; and who is there that will hesitate to follow it, or consent to be laggard in the race?

“ Who, that surveys this span of earth we press,  
This speck of life, in time’s great wilderness,  
This narrow isthmus ’twixt two boundless seas,  
The past, the future, two eternities!—  
Would sully the bright spot, or leave it bare,  
When he might build him a proud temple there?”

FINIS.





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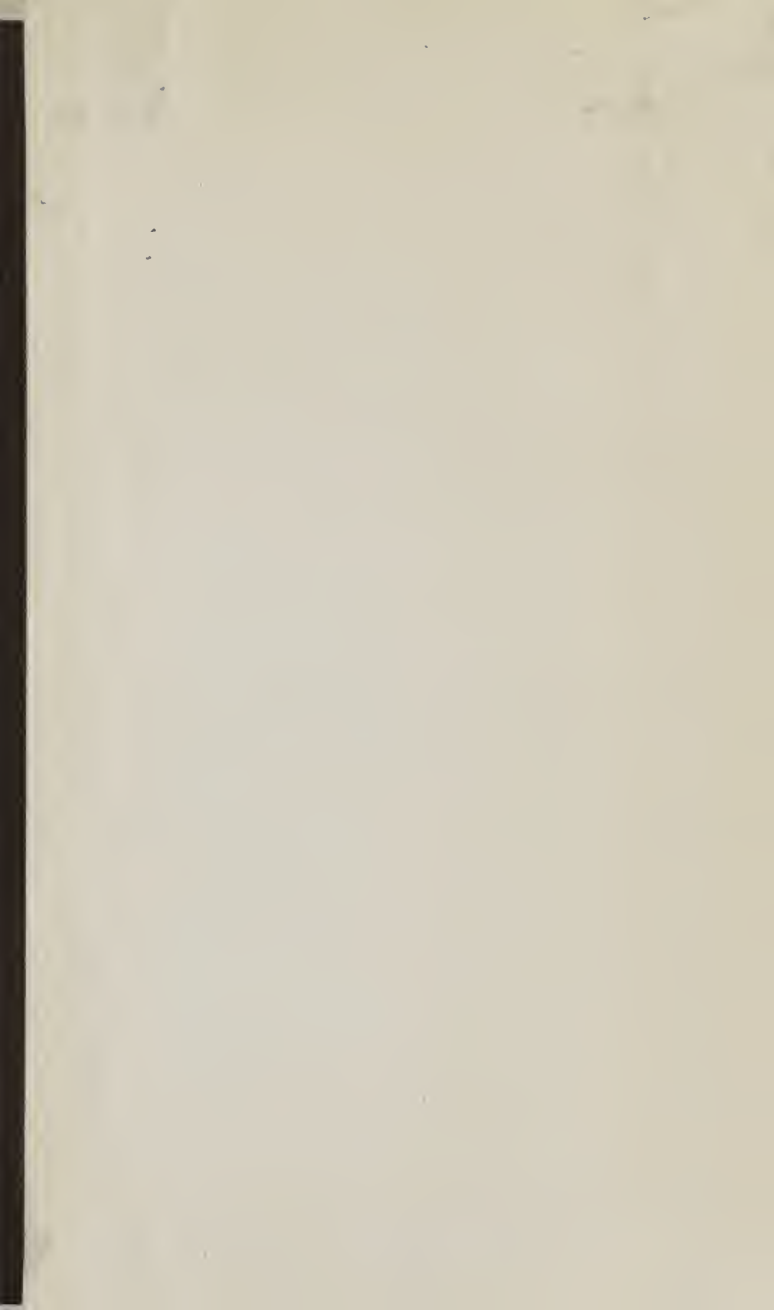
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